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DALLAS' MUNICIPAL SOLID WASTE MANAGEMENT SYSTEM. A CASE STUDY

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This study examines solid waste collection and disposal in Dallas, Texas. The background of the system, including location, geography, demography, climate, form of government, and the solid waste management agencies is described, and the characteristics of the system, including the services, equipment, and finances are discussed.

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A CASE STUDY

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U.S. ENVIRONMENTAL PROTECTION AGENCY
1974

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FOREWORD

Solid waste management systems are an integral part of the environment of nearly every citizen in the United States. Yet until recent years, these systems have not received the attention other visible residential services have enjoyed. This historical neglect has resulted in systems which may not be cost-effective, especially with respect to the rising cost trends encountered in solid waste management activities. These trends arise from two principal factors:

* Environmentally sound disposal methodology is being enforced or strongly encouraged; as a result, disposal sites and needed equipment are now expensive to procure and operate.

* The collection function is highly labor intensive. Thus, the costs of unskilled labor, which have been rising to meet socioeconomic demands, have had enormous impacts on local agency budgets.

This rise in cost pressure has forced all levels of governmental organizations to consider more closely the management and costs of solid waste management activities.

Because efforts to upgrade solid waste management practices are in their infancy, there is still an obvious lack of data bases for evaluative and comparative analyses. This case study is one in a series of case studies of solid waste management systems which has been conducted under the sponsorship of the Office of Solid Waste Management Programs, U. S. Environmental Protection Agency. Kenneth Shuster and Cindy McLaren served as EPA project officers on the case study reported herein. The purpose of these case studies is to fill in this data gap with actual case histories of how cities are handling their solid waste problems.

Concerned agencies at all government levels, as well as private firms, will be able to assess information of the following types:

* The management and operating characteristics of public sector solid waste management systems.

* The institutional forces which give rise to these characteristics.

- Those techniques that have been or are being applied to enhance the measures of productivity, aesthetics, level of service, and environmental control.

These agencies and firms can then use these comparisons to upgrade their systems according to the norms achieved in other cities of similar size, geographical location, and operational and institutional characteristics.

--ARSEN J. DARNAY
Deputy Assistant Administrator
for Solid Waste Management
Office of Solid Waste Management Programs

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INTRODUCTION

The solid waste management system of Dallas, Texas, is one in which problems are recognized and resolved well before they assume serious proportions. Furthermore, the management personnel in the city continue to seek methods to improve the operations of the system, equate the charges to the level of the service, reduce job hazards, and maintain positive worker morale.

Several years ago, the Division of Street and Sanitation Services was created as a parallel division to the Division of Public Works. Since that time, a system of user fees has been implemented in both the collection and disposal functions as a step toward establishing a self-supporting operation. Presently, the collection fees do not completely defray the costs for this activity but considerable study is being given to a graduated fee structure which will equate the service charges with the level of service elected by the customers. Although the graduated fee policy will not result in a uniform level of service, such as all curbside or all carry-out, it will meet with minimum citizen resistance.

The disposal operations in Dallas are currently performed at ten landfill sites, two of which are wholly reserved for city collection fleet and resident use. Private sector collectors are charged for disposal at the remaining eight sites on an equitable basis. The revenues derived from this fee system are considerable and partially defray the disposal operation costs. The solid waste system management is aware of the relatively high costs of operating ten disposal sites and is currently seeking to establish three new facilities at county locations convenient to the city. The relative success of this project will be determined, to some extent, by the level of resistance offered by the residents in the vicinity of candidate sites.

From these efforts, it is clear that system management is aware of potential problem areas associated with its solid waste activities. It is apparent that considerable research efforts have been performed to find attractive and realistic solutions to those problems before they become crises. There is every reason to expect that this highly professional approach will be continued.

The case study of Dallas, Texas, was performed using a carefully structured data gathering technique. Initial contacts were made by both Office of Solid Waste Management Programs and Applied Management Sciences personnel and interviews were scheduled to be convenient for the city personnel. During these interviews, notes were taken and tape recordings were made after obtaining the permission of the interviewees. Extensive efforts were taken to require a minimum of city personnel and whenever possible, existing documentation was solicited to support the general discussions. Figure 1 presents the titles of the people interviewed in Dallas, the dates of these interviews, and the types of the information obtained.

The structure of this report consists of five chapters, including the introduction. Chapter 2 is a systems description abstract which s~~h~~ynopsizes the characteristics of the city and the collection and disposal systems. Chapter 3 presents the findings of the case study effort and identifies potential problem areas. Chapter 4 is a description of the city in terms of those parameters which can affect solid waste management operations. Finally, Chapter 5 reports the characteristics of the solid waste system in considerable detail. All aspects of the system are discussed and appropriate tabular data are presented.

TITLES	DATE	INFORMATION TYPE
Director, Department of Street and Sanitation Services	20 Nov.	General System Characteristics, Problem Areas, History
Operations Analyst, Department of Street and Sanitation Services	20 Nov.	Basic Manpower and Equipment Data
Administrative Assistant, Department of Street and Sanitation Services	21 Nov.	Financial Data and Financial Practices
Safety Supervisor, Department of Street and Sanitation Services	21 Nov.	Accident and Safety History
Director, Action Center	21 Nov.	Quality and Service
Assistant Director, Southern Christian Leadership Conference	21 Nov.	Alleged Discrimination in Personnel and Service
Research Assistant, Chamber of Commerce	21 Nov.	City Background Information
Director, Personnel Department	21 Nov.	Pertinant Data - Tenure, Turnover, Absenteeism, Injuries
Assistant to City Manager for Research	21 Nov.	Background Data on City Financing
Assistant Director, Action Center	22 Nov.	Low Income Areas in Dallas
Director, Department of Equipment and Communications	22 Nov.	Financial Data and Operating Policies for Equipment
Chief, Street Maintenance Division	22 Nov.	Street Cleaning Operation
Chief, Disposal Division	22 Nov.	Disposal Operation Data
*Chairman, Committee on Environmental Quality (League of Women Voters)	30 Nov.	Overview of System
*Chairman, A Beautiful Clean Dallas (ABCD)	30 Nov.	Information on Vagrant Waste

* Telephone Contact

E 1: DATA SOURCES AND INFORMATION TYPES

2

SYSTEM DESCRIPTION ABSTRACT

City: Dallas

Contacts:

John Teipel - Director, Department of Street & Sanitation Services

Ronald Ottwell - Operations Analyst, Department of Street & Sanitation Services

John Finley - Administrative Assistant, Department of Street & Sanitation Services

Robert McMillen - Safety Supervisor, Department of Street & Sanitation Services

Mr. Bullock - Director, Action Center

Mr. George - Assistant Director, Southern Christian Leadership Conference

Sharon Morrison - Research Assistant, Chamber of Commerce

Pierson Ralph - Director, Personnel Department

Dean Vanderbilt - Assistant to City Manager for Research

Charles Griffith - Assistant Director, Action Center

Myron Meader - Director, Department of Equipment Services

Harold Bird - Chief, Street Cleaning Division

James Kelley - Chief, Disposal Division

Mrs. Herbert Wincorn - Chairman, Committee on Environmental Quality League of Women Voters

Mr. Dub Moore - Executive Director, A Better Cleaner Dallas

Dates of Visit: November 20 - November 22

Population Demography:

Date	Total	White	Other
1970	844,000	626,000	218,000
1960	680,000	550,800	129,200
1950	434,000	———	———

Area: 295.6 Square Miles

Density: 2855 Residents per Square Mile

Mileage: Roads - 4401 miles
Alleys - 1436 miles

Collection: Table 1

Miscellaneous: The collection system operated in the City of Dallas is remarkably effective. This finding has several basic reasons. The system is managed by professional and conscientious personnel who operate an effective management information system. Second, the city does not tolerate violations of its litter laws and the ordinances regarding litter are comprehensive and are enforced. Third, both the city population and the commercial sector appear to cooperate well with the Department of Street and Sanitation Services.

Disposal: Table 2

Miscellaneous: There are ten sanitary landfill disposal sites being used by Dallas. All sites lie within the city, are on privately owned property, and are operated by the Disposal Division. Two of the sites are open to the public and there is a disposal fee; the others are restricted for city use. The city recognizes the limited remaining lifetime of these sites and is currently studying the feasibility of securing three large sites in the surrounding county.

TABLE 1
COLLECTION

Collection Function / Collection Variables	Residential Mixed Refuse	Trash[1]	Street Cleaning	Bulky Items
Number of Routes	432	63	150,000 Street Miles/Yr.	8 Rotobooms 8 Support Trucks
Crew Size	Two to Three	2	1	1 per vehicle
Frequency of Service	2/week	1/week	1/month	As required
Point of Collection	70 percent alley 28.3 percent curb 1.7 percent carry-out	Curbside Alley Right-of-Way	Streets	Curb
Method of Collection	Nothing special	Handloading	Mechanical Sweepers 27 Street Vacuums 9 Flushers 8 Litter picker 4 Support trucks 4	Portable Rotoboom Clamshell Crane
Stops	Variable during FY 1971-1972 Monthly Average was 203,040	----------	----------	----------

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[1] All solid waste except putrecibles and bulky items. Trash items are too large for mixed refuse collection and too small for bulky collection.

TABLE 1 (Cont'd)
COLLECTION

Collection Function Collection Variables	Residential Mixed Refuse	Trash	Street Cleaning	Bulky Items
Service Limitations	Container size less than or equal to 50 gal. and 75 pounds	None	None	----------
Incentive System	None	None	None	None
Fund Source	60 percent from user charge 40 percent from General Fund	General Fund	General Fund	General Fund
Tonnage (Annual)	431, 137	222, 070 (est.)	----------	----------
Wage Scales (Hourly)	Driver: $3.37 Helper: $2.63	Driver: $3.37 Helper: $2.63	N/A	N/A
Unions	AFSCME and Operating Engineers of America	Same	Same	Same

TABLE 1 (Cont'd)
COLLECTION

Collection Function / Collection Variables	Residential Mixed Refuse	Trash	Street Cleaning	Bulky Items
Annual Cost	$7.1 Million	Shared with Mixed Refuse	$1.8 Million	Shared with Mixed Refuse
COMMENTS	Commercial customers are collected on residential routes. There are an additional ten pure commercial routes serving the central business district.	Trash operations are augmented on Wednesdays by Mixed Refuse crews and trucks.	Mechanical street cleaning activities only. Collection is mostly inorganic	----------

TABLE 2
DISPOSAL

Disposal Site Disposal Data	1	2	3	4	5
Type	Public Landfill	Public Landfill	City Landfill	→	→
Prepared Capacity (cubic yards)	114,000	354,930	533,600	59,000	108,100
Real loading (cubic yards/day)	2,500	1,500	800	635	550
Expected Lifetime * (years)	3.5	11	1.5	1	3.5
Operating Costs (Including Overhead)	$1,865,269 →	→	→	→	→
Start-up Costs	Unknown →	→	→	→	→
Location	Walnut Hill Public Site	South Loop Public Site	Second Avenue City Site	Pinnell City Site	Kiest City Site
Operating Costs-2 Public Sites	$939,026		—	—	—
Operating Costs-8 City Sites	—	—	$645,921	→	→

* Estimates on April 30, 1972

TABLE 2 (Cont'd)
DISPOSAL

Disposal Site / Disposal Data	6	7	8	9	10
Type	Landfill →				
Prepared Capacity (cubic yards)	27,300	46,000	7,600	14,800	NA
Real loading (cubic yards/day)	475	325	150	100	NA
Expected Lifetime (years)	.25	1.25	3.25	2	NA
Operating Costs (Including Overhead)	→				
Start-up Costs	Unknown →				
Location	Elam City Site	Davis City Site	West Dallas City Site	Killaugh (Brush)	Linfield (Brush)
Operating Costs - Public Sites	—	—	—	—	—
Operating Costs - City Sites	→				

3

FINDINGS AND CONCLUSIONS

3.1: Findings

The solid waste management system in Dallas was found to be operated in a highly professional and competent manner. In particular, it is managed with both foresight and strategy, which is a combination that, until recently, has not been found in many systems. Normal solid waste activities are measured and anaylzed with reasonable precision and meaningful records of critical aspects are maintained. The system is continuously being modified to meet the dynamic conditions found in the City. The professional personnel are now engaged in the task of transforming operational system parameters into a model which is compatible with electronic data processing equipment. The problems of disposal site procurement are being addressed at this time, even though the current sites have an estimated aggregate lifetime of between five to ten years.

There are no aspects of solid waste management that are neglected for consideration. The most recent example of this attitude was the implementation of both collection and disposal user charges which, in addition to increasing the revenue to the General Fund, is the first step in equating solid waste services to their actual costs. At this time, the service charge for collection is insufficient to completely pay for the system operation, but steps are being taken to eliminate this disparity. The disposal user charge is directed primarily at private sector organizations and residents living exterior to City limits. Again, the revenues from these sources do not defray the disposal operation costs. However, it appears that the users of these sites are charged fairly according to the service and convenience received.

The quality of fairness is also found in the manpower aspects of the system. In many public sector collection organizations, the driver of the vehicle does not collect and receives higher pay for an admittedly easier job. This situation is typically built into the system for three reasons. First, the driver position represents a promotional position and a pay raise level in a system which is admittedly career ladder poor. This is an essential incentive in most cases. Second, the driver is generally considered to be a "skilled" laborer (equipment operator) and is usually given more responsibility. Thus, the driver is typically not only responsible for the vehicle (fueling, oil checking, tire checking, cleaning, etc.), but also for the safe operation of the vehicle and conduct of the crew members, for the on-route direction of crew members, and in general for seeing that the assigned task gets done. And third, is the inconvenience of having the driver climb up and down from the cab to perform collection operations. This is not only wearing on the driver but may be inefficient in terms of delay resulting from his non-productive time moving from cab to storage to hopper to storage to cab. Sometimes safety considerations from frequent stepping down from the cab or leaving the vehicle unattended determine the decision for the driver not to collect. Other reasons exist but are generally "status" and "role" oriented which are not operationally justified. Dallas is taking steps to keep the promotional level and have the driver assist in collection by modifying existing vehicular equipment such that the driver can step in or out of the cab. This practice has the additional benefit of cutting back the crew by one man and will reduce collection costs.

The normal problems of employee turnover and absenteeism are found in the Department of Street and Sanitation Services. Records are kept on each of these in order to spot trends and plan for future manpower needs. The roots of these problems, however, are apparently not being addressed at this time as there appears to be no necessity to do so. Absenteeism is reasonably predictable, is not too high, and the system is sufficiently flexible to adapt to the changing daily staff levels. Turnover is high, but the labor pool in the City is sufficiently deep to provide laborer personnel. It appears that until required staff levels cannot be met, there will be little incentive to solve these problems.

Job safety is also under study in Dallas. There is a safety engineer on the staff of the Department whose principal task is to reduce both vehicle and employee accidents. The approach taken is to eliminate as many potential hazards with respect to the equipment as possible. The feeling is that because of the nature of the work, there will always exist job safety problems. However, if the equipment is made fool-proof, a significant number of hazards will be eliminated. A particularly important step that is now being taken is the installation of safety gates to protect the crewman against accidential dismemberment by the packer mechanism.

With few exceptions, the people of Dallas cooperate well with the Department of Street and Sanitation Services. This factor may be the result of either the attitudes of the residents or the enforcement of litter laws or both. The attitudes of residential customers are not easy to determine, but the cooperation of commercial customers was readily observable. The appearance of the waste set out by commercial establishments was exceptional. In many cases, plastic bags are used and these are carefully packed, sealed, and neatly stacked at the curbside for collection. Litter laws are not unusual in large cities, but they are rarely formally enforced. The Department has a Litter Control Division whose sole task is to inspect public and private properties and to write up violation citations when required. This does not appear to be a common practice in other cities, and seems to be highly effective.

There are now two potential problem areas that may become more significant. The first of these is the procurement of disposal sites exterior to the City limits. The landfill sites now being used are depleting, and there appears to be little hope of finding additional sites in the City. There are several large tracts in the surrounding county that would be suitable.

However, the people living adjacent to these areas may not wish to have a nearby disposal operation and they could attempt to block City efforts. The magnitude of this problem is not known inasmuch as the City appears not to have publically announced its intentions. A related problem is the distance that crews will have to travel in the event sites remote to the City are secured. This will involve a major districting and routing plan and this is currently being examined. It is quite possible that transfer stations will be employed which would certainly ease the burden of potentially lengthy travel times for collection crews.

The second potential problem area is concerned with labor-management relations. The existing turnover and absenteeism rates indicate that there is discontent among the collection workers. Because union influence is very low (the state of Texas prohibits its cities from formally recognizing unions) there is no nucleus around which organized actions can readily form. However, there is now a minority group organization in the City that is actively attacking alleged discrimination practices by city employees, notably the police. This same organization was both active and effective in the sanitation worker actions in Memphis and Atlanta several years ago. At this time, the activities of the Department of Street and Sanitation Services are not a priority item, but it should not be assumed that this will continue indefinately.

3.2: Conclusions

There are several explanations for the success of the solid waste management system in Dallas. The management is competent and farsighted enough to solve problems before they assume large proportions. Professionalism, however, is necessary but not sufficient to ensure a successful system. Success can only come if the staff is allowed to implement its plans.

The Department of Street and Sanitation Services does not have many of the constraints facing similar agencies in other cities. The Department does not have to negotiate with organized labor. The city is growing and its housing and population are relatively youthful. Newer housing is designed to accommodate sufficient waste storage, and the attitudes of the residents are responsive to the needs of the solid waste system. Finally, the solid waste system management actively influences legislation. This fact is reflected in the change to user charge financing and in the enforcement capabilities given to the Department for litter control.

4

BACKGROUND OF THE SYSTEM

The City of Dallas was incorporated on Feburary 2, 1856, and is the second largest city in the State of Texas. The City is located in North Central Texas, a section of the state characterized by rolling hills, and is approximately 250 miles from the Gulf of Mexico at an elevation of 500 to 700 feet above sea level. The Dallas Standard Metropolitan Statistical Area consists of over one and a half million people living within the City and in the Counties of Dallas, Collin, Denton, Ellis, Kaufman, Grayson, Johnson, Tarrant, and Rockwall. It is a major financial center for the southern United States, and is the headquarters for 201 insurance companies with assets totaling nearly $4.0 billion and the two largest banks in the southern U.S., east of Los Angeles. The manufacturing firms in Dallas employ 20.3 percent of the workforce with approximately 65 percent of these employees being employed in the production of durable goods. The leading durable goods industries are electric-electronic equipment, transportation equipment, and non-electrical machinery. The major non-durable product industries are food and kindred products, apparel and finished products, and printing and publishing. In addition, Dallas is the home of the famous Nieman-Marcus retail chain.

The City of Dallas is a rapidly growing urban center. The population of the Dallas SMSA has increased by 39.1 percent between 1960 and 1970, making it the eighth-fastest growth area in the United States. At the same time, the Dallas Central Business District has continued its vigorous growth with the construction of 33 new office buildings, representing an increment of 13 million square feet of floor space since World War II. Construction will begin on two new buildings, each rising over 50 stories, in the coming year (1973).

Dallas appears to have a problem of securing sufficient landfill sites. Currently, the City operates ten landfills within the corporate limits. However, the Department of Street and Sanitation Services anticipates that four of these sites will be depleted by the end of 1973. Thus, the problem of securing additional landfill sites looms as a major problem are for the Department. Another problem facing the Department is personnel. Currently, the turnover rate for the Department as measured by the number terminations per year relative to the workforce is 81.6 percent. In addition, a new effort by the unions to organize the labor force is anticipated in 1973.

4.1: Location, Demography, Economic Base, and Climate

The corporate limits of Dallas currently include 296 square miles of land area with approximately 4400 miles of paved streets and an additional 1400 miles of alleys. In 1952-53, the land area of the City was 170 square miles so it is clear that the City is annexing land to support its economic growth.

The population of the City of Dallas has grown at a rate of 39 percent between 1960-1970, which is equal to the rate of growth of the Dallas Standard Metropolitan Statistical Area. The black percentage of the population increased from 19 percent in 1960 to 24.9 percent in 1970.

As the population has grown, the tax base within the City has also shown rapid growth, increasing by 46 percent during this interval. This has allowed the City government to maintain the tax rate at a relatively low level. In 1962, the City tax rate was $1.56 per $100 valuation, and in 1971, it was $1.87, an increase of approximately 20 percent. This sound tax base and rapid growth have made the City financially secure and not highly dependent upon state or federal funds.

The high level of Dallas' economic activity is reflected by the fact that in the southern half of the United States east of Los Angeles, Dallas ranks first among Standard Metropolitan Statistical Areas in:

- Wholesale sales and trade mart facilities
- Manufacturing employment and number of factories
- Size of banks, lending capacities of individual banks, and total volume of banking business
- Postal receipts and air mail volume
- Number of headquartered companies with $1 million or more in net worth.

Total employment has increased by 54.6 percent in the Dallas SMSA between 1960 and 1971 with the manufacturing labor force rising with an annual average of 7000 employees during this period. For the 20-year period of 1948 to 1967, wholesale trade increased by a 5-year average rate of 32.7 percent. By all economic indices, Dallas has experienced strong and rapid economic growth in the past decade.

The continued growth of Dallas, as a major urban center, is further guaranteed by the construction of the new Dallas-Fort Worth Regional Airport which is strategically located equidistant from the four major population centers in North America -- New York City, Chicago, Los Angeles, and Mexico City. The first phase of this 18,000 acre airport is expected to be completed in 1973. Upon completion, this new airport will be the largest air terminal in the world, capable of conveniently handling 55 million passenger boardings a year and more freight than any seaport in the world handles today.

The climate of Dallas is characterized by a high mean annual temperature of 65.8 degrees, with a wide variance about that figure. The coldest month is January with a mean temperature of 45.9 degrees, and it is warmest in August with a mean temperature of 85.0 degrees. There are, however, on the average, 94 days a year in which the temperature rises above 90 degrees.

The mean precipitation is 34.55 inches with an average relative humidity of 63 percent. The heaviest rainfall normally occurs in the spring during April and May. Snow is a rare event and is unimportant as a source of moisture in the area. Snow does, however, create major traffic problems when it does fall in the area. Freezing rain occurs more frequently and is considered to be an important problem.

4.2: Form of Government and Organization

4.2.1: Form of Government

The citizens of Dallas elect 11 council members every two years. It is the duty of the City Council to run the affairs of the City. The members are all elected on a city-wide basis, but eight members must reside in the districts from which they are elected. The person, elected as member of Council, Place No. 11, shall be the presiding officer and serve as the Mayor of the City of Dallas. He may vote on all matters but does not possess any veto power. The actual strength of the Mayor depends upon his personal attributes and the influence he has with the other members of the Council. A primary function of the Council is to select the City Manager.

The City Manager is the chief administrative and executive officer of the City. He translates the policies determined by the Council into action, and enforces all ordinances and resolutions related to those policies. He appoints 22 department heads who are directly responsible to him for their actions. The City Manager also acts as the Budget Commissioner. He receives budget estimates from the various departmental heads, consolidates these into a City budget, and submits to Council a budget estimate of the expected revenue of the City and the expense of conducting the City affairs. for the coming fiscal year. The estimated budget includes the following information:

(1) An itemized estimate of the expense of conducting each department, division, office, board and commission;

(2) Comparison of such estimates with the corresponding items of expenditure of the last two fiscal years, and with the expenditures of the current fiscal year plus an estimate of expenditures necessary to complete the current fiscal year;

(3) Reason for proposed increases or decreases of such items of expenditure compared with the current fiscal year;

(4) A statement from the City Manager of the total probable income of the City from taxes for the period covered by the estimate;

(5) An itemization of all anticipated revenue from sources other than the tax levy;

(6) The amount required for the payment of principal and interest on the City's debt;

(7) The total amount of outstanding debts, with a schedule of maturities;

(8) Such other information as may be required by the Council.

In preparing the budget estimate, the City Manager receives help from the Department of Revenue and Taxation, and the City Auditor. The City Council gives final approval to the budget.

4.2.2: Organization

The municipal organization chart, shown as Figure 2, illustrates a normal organization structure for large cities operating under a Council-Manager form of government. Figure 3 illustrates the organization of the Department of Street and Sanitation Services. A more detailed chart is unavailable due to a recent organizational change which created three separate departments out of the previous Department of Public Works. This change was made because the former Department of Public Works was regarded to be too large to be managed efficiently. The reorganization retained the D. P. W. and created two new departments, the Department of Street and Sanitation Services, and the Department of Engineering. Within the Department of Street and Sanitation Services there has been some reorganization, but Figure 3 basically illustrates the Department's current organization.

4.3: Solid Waste Management System History

The most recent significant impacts on the solid waste management system in Dallas occurred in the past year as two major events took place. The first event was the reorganization of the Department of Public Works into three separate

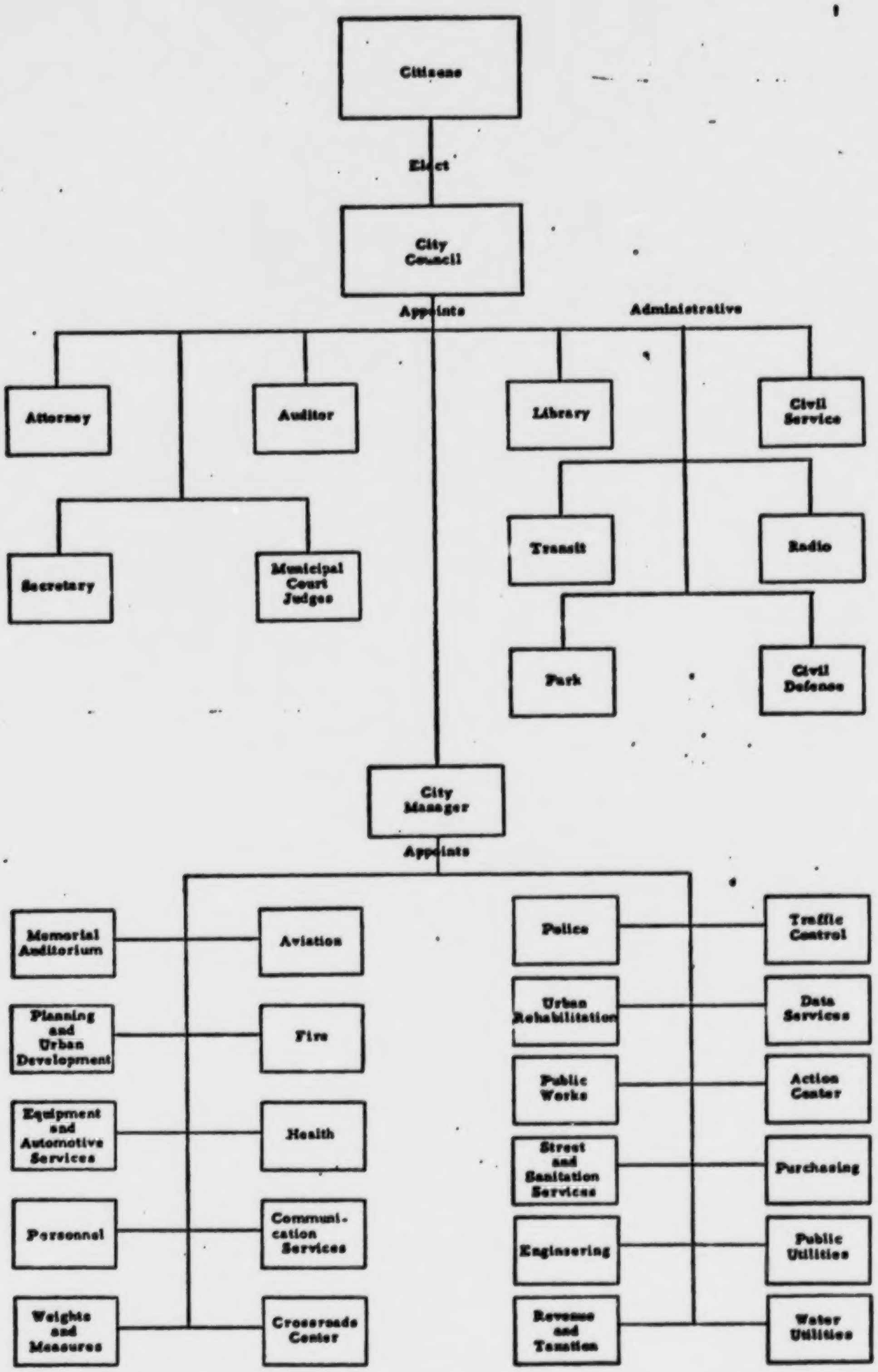

FIGURE 2: ORGANIZATION CHART OF THE DALLAS CITY GOVERNMENT

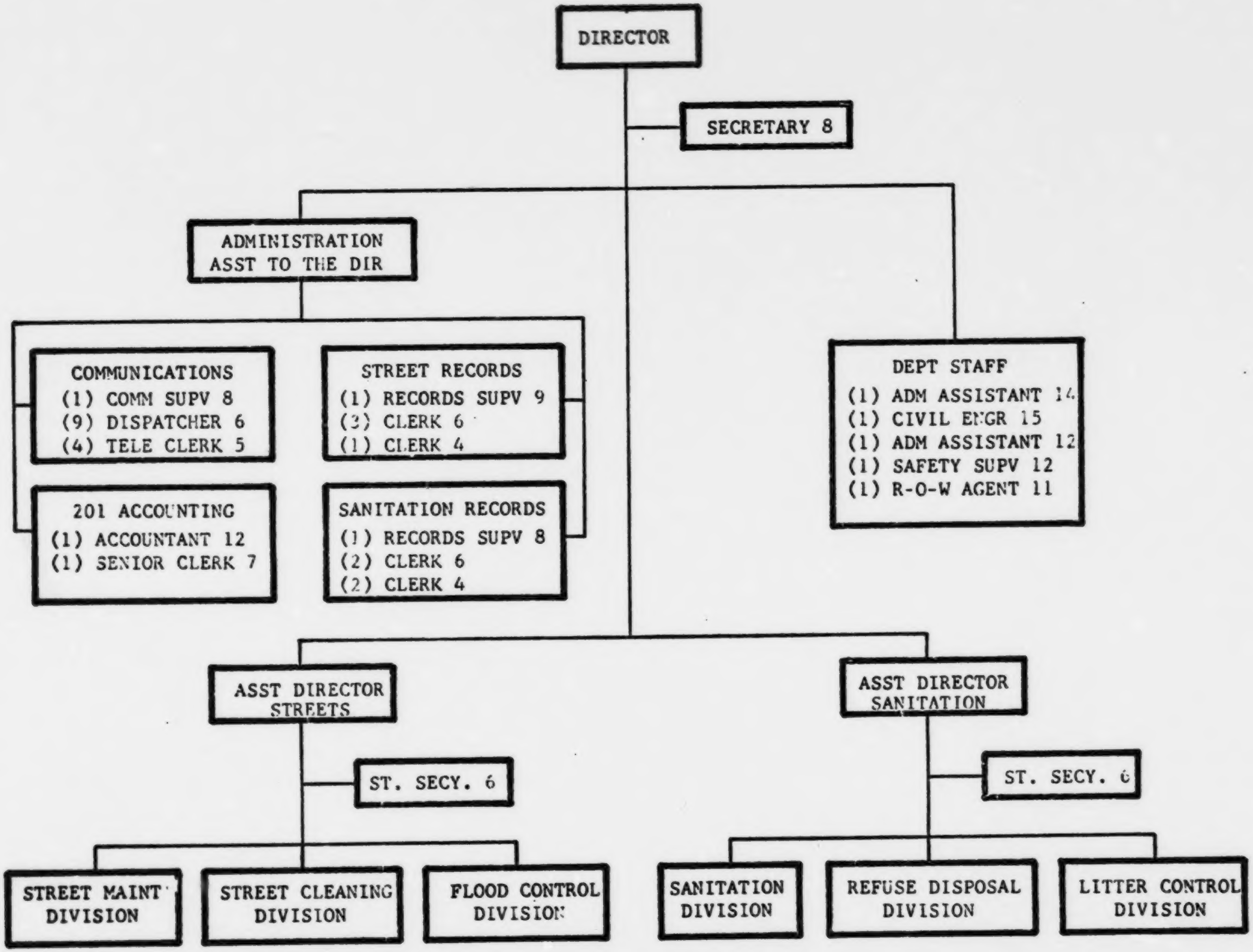

FIGURE 3: ORGANIZATION CHART - DEPARTMENT OF STREET AND SANITATION SERVICES

departments, one of which was the Department of Street and Sanitation Services. This upgraded sanitation responsibilities from division to a department status in the organization of the city. The Director of the department reports to the City Manager as a peer of the Directors of the two other departments.

The second event occurred on January 1, 1972, when the department shifted to a partial user charge for collection and disposal activities in order to avoid a city tax increase. The revenue from the user charge is expected to cover about 60 percent of total sanitation expenses, with the remaining revenues coming from the General Fund. It is anticipated that within the next two to three years the system will be completely dependent upon user charges for funding. A description of the current charges for both collection and disposal is presented in Chapter 5.

4.4: Agencies Impacting Dallas' Solid Waste Management System

There have been four groups which have had recent impact upon the Department of Street and Sanitation Services. Basically, these have been local groups; there has been little state or regional influence. While the City of Dallas contemplates securing landfill sites outside the city limits, a formalized regional plan has not yet been developed. At the state level there appears not to be any formal involvement with the city's collection and disposal systems.

4.4.1: A Beautiful Clean Dallas (ABCD)

A goal of "A Beautiful Clean Dallas" is to enhance the appearance of the city by reducing the amount of vagrant waste (litter). This organization has been urging the city to increase the number of litter receptacles in the city, but has met with only limited success. The Department of Street and Sanitation Services, while wishing to cooperate with ABCD, has been unable to respond in strength due to cost constraints. Money for extra litter receptacles has not been allocated in the budget. A plan to place advertising on the receptacles and thus reduce or eliminate the initial cost of the containers was vetoed by City Council as a City Ordinance forbids commercial advertising on city property.

The ABCD group is also concerned about the current method of collecting waste from the receptacles. This job is currently handled by three separate agencies; The Department of Parks, Department of Public Works and The Department of Street and Sanitation Services. They feel a better and more efficient job could be accomplished if one governmental agency was given complete responsibility.

4.4.2: League of Women Voters

The Committee on Environmental Quality of the League of Women Voters claims that it was instrumental in influencing the Department of Street and Sanitation Services to start a paper salvage program. This program basically consists of a special collection of old newspapers once a week. This program, which has now been operating for a little over a year, has met with little financial success. In all months of operation, except one, there has been a net deficit budget. For the calculation of gross income for the program, the League urged, and successfully obtained, an income measure which reflected the external or social benefit of the program. This income measure was designated as $1.20 per ton relief to landfill costs. Without this measure of external benefits, the program would appear even less successful on a financial basis.

The Department of Street and Sanitation Services is encouraging a shift to plastic bags as a convenient and reliable trash container. The League is generally opposed to this shift since the plastic bags are not biodegradable. Rather, they would prefer to see the Department choose paper bags which are as strong as the plastic bags. Paper bags are currently used in the suburban community of Farmers Branch with great success. Their only drawbacks as compared to plastic bags are that they are a little more expensive, and are harder to close.

Finally, the League has urged the Department of Street and Sanitation Services to continually check their landfills for compliance with required safety and public health regulations. The League of Women Voters feels that not all the landfills are being operated on a sanitary basis. This statement was made as a result of on-site visits and conversations with municipal employees.

4.4.3: Southern Christian Leadership Conference

The Southern Christian Leadership Conference feels that it is difficult for blacks to either obtain jobs in the Department or to be promoted to higher positions of responsibility. The SCLC also feels that not enough men were serving on a truck. The representative interviewed felt that the system in Memphis with four to five men per truck was ideal. He was against the current three-men-per-truck system and was totally opposed to the planned reduction to two men per truck.

4.4.4: Unions: American Federation of State, County, and Municipal Employees, and Operating Engineers of America

The two unions, which have currently organized a portion of the Department of Street and Sanitation Services employees, have not been able to exert any noticeable pressure on the Department. Their membership rolls in the Department are very small with only 25 employees enrolled in AFSCME and 61 employees enrolled in the Operating Engineers out of a departmental total of 1024 employees. This limited membership, plus the state statute that prohibits the City to engage in collective bargaining reduces the power of each union and currently makes them relatively insignificant pressure groups.

5

SOLID WASTE SYSTEM CHARACTERISTICS

The solid waste management system that is in operation in the City of Dallas is functionally similar to corresponding systems in many other large cities. Waste that has a putrescible fraction is collected as mixed refuse on a regular basis. Trash wastes are both formally and informally collected, depending on the location. Formal collection represents that waste intentionally set out. Informal collection is largely a street litter control activity. Streets and alleys are swept and flushed on a regular basis, and consequently, the vagrant waste problem is addressed by both the Street Cleaning and Sanitation Collection Divisions of the Department of Street and Sanitation Services.

This chapter sets forth the solid waste management activities performed in Dallas. Crucial aspects of manpower, inner city problems, disposal operations, equipment policies, and financing are discussed in discrete sections. Because of the recent separation of solid waste activities to be performed by a separate department, a considerable amount of data was aggregated from a variety of sources. Consequently, there will be some inconsistencies in the presentation, but these have been either adjusted or discrepant data has been identified by footnote.

The Department of Street and Sanitation Services is responsible for the collection of essentially all solid waste generated in the city that is not collected by the private sector. The small exception are some litter receptacles which are collected by other city agencies. To carry out these programs, the Department has created two separate solid waste operations - Street and Sanitation. Within Street Operations, there are three Divisions -Maintenance, Cleaning, and Flood Control. Similarly, within Sanitation Operations, there are three Divisions - Collection, Disposal, and Litter Control. Like many other cities, Dallas calls upon the Department for emergency snow and ice removal; however, unlike most cities, Dallas requires that its Department of Street and Sanitation Services maintain a Major Emergency Plan whereby men and equipment are prepared to assist other city personnel in emergency conditions resulting from floods, wind damage, building collapse, fire, and accidents. In addition, the Department is responsible for the collection of trash from wire containers located on city street corners in high-density areas, and in removal of high weeds and grass bordering streets, residential, and business areas.

5.1: Sanitation Operations

Three collection functions are performed by Sanitation Operations, two of which are done by the Sanitation Collection Division. The Litter Control Division is responsible for the inspection of "blight" conditions on private property and the issuing of citations for violation of the litter ordinance.

5.1.1: Sanitation Collection Division

This Division is responsible for the collection of mixed refuse, garbage, rubbish, trash, ashes, and yard wastes from private dwellings, duplexes, some apartments, and some commercial establishments that do not receive service from private contractors. It is also responsible for the removal of dead animals and special pathological wastes. The Division does not collect construction or demolition wastes, animal or agricultural wastes, or sewage treatment residues. For organizational purposes, the Division has divided its collection responsibilities into two separate categories - mixed refuse (residential and commercial), and trash collection. Trash collection includes all items too large to be handled by compactor equipment, yard waste, and similar discards. The mixed refuse crews collect trash on Wednesdays whereas the officially designated trash collectors operate five days per week.

Mixed Refuse Collection

Duties and Level of Service

The duties of the mixed refuse collection personnel in the Sanitation Collection Division, as well as all other responsibilities of the Department, are stipulated in Ordinance 13772 and an amendment, Ordinance 13796, of the Dallas City Code (see Appendices A and B). The Division is required to collect all mixed refuse from both private and commercial customers requesting service provided that wastes are stored in proper containers. In no case will Division personnel collect mixed refuse in containers exceeding fifty (50) gallons or seventy-five (75) pounds. Metal, plastic, and paper containers are allowed; and, some customers (approximately 1 percent) use plastic bags. In FY 1971-1972, almost all mixed refuse was collected at the curbside (98.3 percent, up from 95.2 percent in the previous year). The remainder was carried out by collection crews. Management reported that the average distance for carry-out was about 50 feet.

Direct user charges are assessed for the collection service. Residential units are billed $1.50 per month for alley/curbside pick-up and $5.00 per month for take-out. This billing differential clearly accounts for the drop in the fraction of the carry-out customers. Commercial rates are determined by the number of containers and frequency of collection (Table 3).

Special services (unscheduled and extraordinary collections) for both residential and commercial sources are provided, and the Department operates a Sanitation Customer Service within its offices to handle all customer requests. Special collections are made of yard wastes and bulky items too large to be handled by regular trash crews. All special services are performed on a cost plus 15 percent basis.

TABLE 3
MONTHLY CHARGES FOR COMBINED COLLECTION [1]

Quantity of Solid Waste			Number of Collections [2] Per Week			Cost for Each Collection per Week
No. of 20 Gallon Containers	Gallons	Cubic Yards	2	3	6	
1-5	100	1/2	$ 4.00	$ 6.00	$12.00	$ 2.00
6-10	200	1	8.00	12.00	24.00	$ 4.00
11-15	300	1 1/2	11.00	16.50	33.00	$ 5.50
16-20	400	2	14.00	21.00	42.00	$ 7.00
21-25	500	2 1/2	17.00	25.00	51.00	$ 8.50
26-30	600	3	20.00	30.00	60.00	$10.00

[1] Owners of commercial establishments may choose to be billed cost plus 15 percent before commencement of service.

[2] Commercial clients must choose among 2, 3, or 6 collections per week.

Manpower/Equipment Allocations

Collection crews consist of a skilled collection and transport driver and either one or two unskilled collection laborers. The Department is currently studying the feasibility of reducing all crews to one driver and one laborer. Approximately 865 of the Collection Division's 904 personnel are assigned to mixed refuse collection. The equipment used for mixed refuse collection activities consists primarily of sixteen and twenty yard packers and a smaller number of special collection vehicles. Table 4 gives the details of the manpower and equipment allocations within the Department.

There are currently 432 mixed refuse collection routes, and each collection crew is assigned two routes. In FY 1971-1972, there were 235,005 residential units (201,837 single dwellings, and 33,168 dwelling units in duplexes and apartments), and 12,338 commercial locations served. Collection at all residential units is made twice a week, Monday, Tuesday, Thursday, and Friday. On Wednesday, the mixed refuse crews are assigned to trash collection details as well as certain street cleaning operations. Commercial

TABLE 4

SOLID WASTE SYSTEM
MANPOWER EQUIPMENT ALLOCATIONS BY FUNCTION AND DISTRICT, 1971
(Authorized)

Manpower	Collection Division											Street Cleaning Division																
	Mixed Refuse and Trash							Trash				Day Personnel																
District \ LC	S	F	LM	CC	C	ST	AS	RBO	RBD	TD	TR	ST	AS	S	EPC	IC	SLM	SSC	SFC	MLM	LFO	MC	SUM	SMC	CLM	AC	HC	PCO
District #1	1	6	12	65	165			1	3	0	0			1	3	3	1	5	2	1	2	5	6	1	1	3	6	5
District #2	1	4	8	50	131			1	3	0	0			1	3	3	1	5	2	1	2	5	7	1	1	3	3	4
District #3	1	5	10	50	131			2	6	3	0			1	3	3	1	6	2	1	2	5	5	1	1	3	6	1
District #4	1	5	10	57	150			2	6	0	12			1	3	3	1	6	2	1	3	5	5	1	1	6	3	4
TOTAL	4	20	40	222	577	1	1	6	18	3	12	1	1	4	12	12	4	22	8	4	9	20	23	4	4	15	18	14
Equipment																												
Cushman Scooters (1 cu.yd.)	3																											
"Pak Rats" Side Loading (10 cu.yd.)	5																											
"Bobtails" (10 cu. yd.)	6							7																				
Trailers (35 cu. yd.)	7							40																				
Side Packers (16 cu. yd.)	55																											
Packers - Rear Loading (20 cu. yd. with 3 cu. yd. hopper)	2																											
Packers - Rear Loading (20 cu. yd.)	25																											
Packers - Side Loading (20 cu. yd.)	116[1]																											
Clamshell Rotobooms								8																				
Leaf Vacuums												9																
Mechanical Street Sweepers												22																
Mechanical Alley Sweepers												5																
Mechanical Turf Sweepers												4																
Street Flushers (1500 gallon)												11																
Tractor Mowers												44																
Modified Tractor Mower (slope)												4																
Support Trucks (5 and 10 cu. yd. dump trucks)								8				12																
TOTAL	219[2]							63				111																

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[1] On 62 of these packers, the driver's side has been modified for step-in operations, allowing collection to be carried out by two-man crews.

[2] Does not include spares.

TABLE 4 Continued

Function	Street Cleaning Division								Litter Control Division					Other				Total
	Night Personnel (Downtown Only)																	
District \ LC	S	W LM	SSC	FLM	SFC	ILM	HC	ETD	ST	AS	SS	ZS	CL	SPS	SUP	ANC	INS	☒
District #1																		298
District #2																		240
District #3																		249
District #4																		288
TOTAL	2	1	10	1	13	2	21	7	1	1	2	7	24	8	1	5	16	126 1201
Equipment																		
Cushman Scooters (1 cu.yd.)																		3
"Pak Rats" Side Loading (10 cu.yd.)																		5
"Bobtails" (10 cu. yd.)																		13
Trailers (35 cu. yd.)																		47
Side Packers (16 cu. yd.)																		55
Packers - Rear Loading (20 cu. yd. with 3 cu. yd. hopper)																		2
Packers - Rear Loading (20 cu. yd.)																		25
Packers - Side Loading (20 cu. yd.)																		116
Clamshell Rotobooms																		24
Leaf Vacuums																		9
Mechanical Street Sweepers																		22
Mechanical Alley Sweepers																		5
Mechanical Turf Sweepers																		4
Street Flushers (1500 gallon)																		11
Tractor Mowers																		44
Modified Tractor Mower (slope)																		4
Support Trucks (5 and 10 cu. yd. dump trucks)																		12
TOTAL									0									401

*** Not assigned to districts - appears as a column total with no column entries.**

TABLE 4 Continued
DEFINITIONS FOR HEADERS

AC - Alley Cleaning Crewman
ANC - Animal Collection Crewman
AS - Assistant Superintendent
C - Crewman
CC - Crew Chief
CL - Clerical
CLM - Curb Leadman
EPC - Emergency Pick-up Crewman
ETD - Emergency Truck Driver
F - Foreman
FLM - Flusher Leadman
HC - Hand Cleaning Crewman
HLM - Hand Cleaning Leadman
IC - Inlet Crewman
INS - Inspector
LM - Leadman
LVO - Leaf Vacuum Operator
MC - Mower Leadman
MLM - Mower Leadman
PCO - Push Cart Operator
RBD - Rotoboom Driver
RBO - Rotoboom Operator
S - Supervisor
SLM - Street Leadman
SMC - Slope Mower Crewman
SPS - Special Services Personnel
SS - Sector Supervisor
SSC - Street Sweeper Crewman
ST - Scientific, Technical Staff Member
SUM - Summer Mower Crewman (Temporary)
SUP - Supplies Personnel
TD - Truck Driver
TR - Transfer Station Crewman
ZS - Zone Supervisor

establishments may choose either 2, 3, or 6 collections weekly. For scheduling and manpower/equipment allocation purposes, the Department has divided the metropolitan area served by the collection crews into four districts. The workday is eight hours (6:30 a.m. to 2:30 p.m.), and crews are expected to complete their assigned route each day. Table 5 shows time breakdowns for several routes on which data were available.

The Sanitation Collection Division facilitates the shipment of solid wastes to the disposal sites from certain areas by operating a transfer station which allows the contents of five packer trucks to be placed in one 35 cubic yard trailer.

TABLE 5
TOTAL DAILY TIME FOR SEVERAL REPRESENTATIVE ROUTES

Route	Crew Size	Yard to Route	Route Collection	Travel Time[1/]	Lunch and Breaks	Time at Landfills	Total
413	2	15 min.	4 hrs. 25 min.	1 hr. 45 min.	1 hour	12 min.	7:37
414	2	12 min.	4 hrs. 25 min.	1 hr. 35 min.	1 hour	12 min.	7:24
415	2	18 min.	4 hrs. 42 min.	2 hours	1 hour	12 min.	8:12
416	3	16 min.	4 hrs. 48 min.	1 hr. 45 min.	1 hour	12 min.	8:01
417	2	17 min.	5 hrs. 51 min.	1 hr. 55 min.	1 hour	12 min.	9:15
418	2	18 min.	3 hrs. 20 min.	1 hr. 45 min.	1 hour	12 min.	6:45
419	2	18 min.	4 hrs. 21 min.	1 hr. 50 min.	1 hour	12 min.	7:41
4110	2	15 min.	4 hrs. 40 min.	1 hr. 35 min.	1 hour	12 min.	7:42
4111	2	18 min.	2 hrs. 40 min.	1 hr. 35 min.	1 hour	12 min.	6:00

[1/] Excludes time at the disposal site but includes time necessary to travel from the the disposal site to the garage at the end of the workday.

Efficiency and Productivity

Data on the quantities of mixed refuse collected are quite accurate because an average of 8 out of 10 municipal collection vehicles are weighed at the disposal sites. The Division is currently collecting about 36,000 tons of mixed refuse per month. Table 6 presents monthly mixed refuse data for the past three years.

TABLE 6

MONTHLY MIXED REFUSE COLLECTION (estimated tons)

	1968	1969	1970	1971	1972
October	30,405	35,373	36,115	37,421	
November	27,892	30,134	31,067	34,488	
December	32,255	36,057	35,690	37,330	
January		29,255	33,228	30,432	32,127
February		27,472	31,034	28,316	33,365
March		30,564	37,974	34,622	40,895
April		34,601	37,708	35,479	32,331
May		38,235	35,956	34,642	38,796
June		33,147	40,074	37,035	39,217
July		33,456	37,671	35,983	35,823
August		32,168	35,674	39,179	37,417
September		34,557	37,757	35,732	31,907
Monthly Average	30,184*	32,918	35,829	35,055	35,764**

*Three months

**Nine months

The data in Table 6 indicates that collection quantities exhibit seasonality, but no growth since 1970. The total amount collected over the last reported 12-month period was 431,137 tons. The Department reports that there are approximately 588 customers on the average route. Given this data, the average crew collects 9.6 tons of mixed refuse daily, which is equivalent to 33 pounds per stop, on the average. These collection quantities necessitate the average crew making 3 trips to the disposal site daily. Each trip takes approximately 35 minutes, and is about 6 miles one-way.

In 1971, the cost of mixed refuse and trash collection was just under $7.1 million, of which $5.1 million (or 72%) represented labor costs. Efficiency and productivity for the Sanitation Collection Division are summarized in Table 7.

TABLE 7

EFFICIENCY AND PRODUCTIVITY DATA

	Parameter / Collection Function	Mixed Refuse Collection	Trash Collection	Street Cleaning
Community Description	Population Served	844,000		
	No. of Resid. or Comm. Units 1/	254,000		
	Street Miles Alley Miles	5,800		
	Area (sq. mi.)	265.6		
	Pop. density (peo/sq. mi.)	3,179		
Waste Amounts	Annual Amounts Collected	431,137 tons (est.)	222,070 tons (est.)	120,000 miles (est.)
	Lbs./unit/wk	65.28	33.63	-
	Lbs./person/day	2.81	1.45	-
Collection System Description (inc. Level of Service)	Point of Collection	Alley/Curbside 98.3% Carryout (backyard) 1.7%	Curbside, Backyard, Alley	Curbs, Sidewalks, Rights-of-Way
	Freq. of Collection	Residential: 2/wk; Commercial 2, 3, or 6/wk.	1/week	1/month
	Type of Storage Container	Any container < 50 gal. and <75 lbs.	-	-
	Ave. Dist. to Disp. Site	6 miles	6 miles	-
	Avg. Miles Driven/truck/day	18 miles	-	12 miles
	Avg. Hours worked/day	8	8	8 (2 shifts)
	Direct men	776 2/	126 2/	225
	Crews	432	63	33
	Crew size	2 or 3	2	1, 2, or 3 - depending on equip.
	Trucks	216	63	103 3/
Wages	Ave. wages and fringe for laborers	$ 2.63/hour	$ 2.63/hour	N.A.
	Ave. wages and fringe for drivers	$ 3.37/hour	$ 3.37/hour	N.A.
Collection Cost/Efficiency Figures	Stops/Crew/Day	588	-	-
	Tons/Crew/Day	9.6	8.0 4/	-
	Coll. Cost/resid. unit/yr.	$ 27.83		$ 5.87
	Coll. Cost/person/yr.	$ 10.47		$ 2.11
	Coll. Cost/ton/yr.	$ 10.82		$11.87
	Total Coll. Cost/yr.	$7,070,000		$1,780,000
Disposal	Type & No. of Disp. Sites	10 Landfills 5/		
	Total Disp. Cost/yr.	$1,584,947		
Total Cost	Total Cost/yr.	$10,434,947		
Misc. Cost Ratios	Coll. Expense as % of tot. Exp.	84.8		
	Coll. labor expense as % of tot. Coll.	76.6		
	Coll. equip. expense as % of tot. Coll.	21.9		
	Proc. & Disp. expense as % of tot. Exp.	15.2		
	Proc. & Disp. labor expense as % of tot. Disp.	52.1		

LEGEND FOR TABLE 7:

1/ Includes approximately 10,000 commercial units. Also, the total number of dwelling units in Dallas is about 303,000. Approximately 50,000 dwelling units are served by private contractors (essentially all high-rise).

2/ The authorized total for both collection functions is 904 men which includes supervisory personnel.

3/ See Table 4 for breakdown

4/

$$\frac{222{,}070 \text{ tons/year}}{63 \text{ trucks} \times 260 \,\frac{\text{days}}{\text{year}} + 216 \text{ trucks} \times 52 \,\frac{\text{days}}{\text{year}}} = 8.043 \text{ tons per truck per day}$$

5/ Of the ten disposal sites, eight are restricted for city and resident use. Two of these are brush sites. The remaining two sites are open for any agent that wishes to dispose of waste and fees are collected.

Current and Future Developments

At the present time, the Department is developing a vehicle scheduling computer program in order to optimize its manpower/equipment allocations. In addition, the city plans to expand its transfer station operations as the available landfill sites (there are currently ten) are filled, and sites further away from neighborhood collection routes must be used. Also, the Sanitation Collection Division is studying the feasibility of using plastic bags and the possibility of milling refuse to achieve greater volume reduction.

Trash Collection

Duties and Levels of Service

Crews collecting rubbish, yard wastes, and bulky materials normally operate five days a week, although some crews do work on Saturday. Collection from residential and commercial units is made principally on Wednesday when full-time trash crews are supplemented by the Division's mixed refuse crews. During the other weekdays, the trash crews concentrate their collection activity on vagrant litter and street wastes.

Manpower/Equipment Allocations

Because mixed refuse and trash collection activities are performed by many of the same personnel, it is difficult to segregate those employees within the Sanitation Collection Division whose responsibilities are strictly trash collection. Trash crews are allocated 63 pieces of equipment ("Bobtails", Open Trailers, and Clamshell Rotobooms), and there are approximately 40 people (principally drivers of the above equipment) who are assigned specifically to this collection function. The remainder of the personnel (mainly crew chiefs and crewmen) are shared with mixed refuse collection. Table 4 summarizes the manpower/equipment allocations.

Efficiency and Productivity

The Division is currently collecting about 18,000 tons of trash per month. Table 8 presents monthly data for the past three years. The relative activity of the trash collection function during the week can be seen in Table 9.

TABLE 8

MONTHLY TRASH COLLECTION (estimated tons)

	1968	1969	1970	1971	1972
October	16,226	16,412	18,187	19,277	
November	12,227	15,172	17,984	17,850	
December	11,523	15,483	19,737	18,981	
January		18,231	16,896	19,281	15,801
February		20,005	18,324	20,678	17,188
March		15,288	18,817	24,588	20,718
April		21,090	24,096	20,642	16,649
May		20,190	24,668	21,081	19,978
June		21,600	22,972	22,916	20,191
July		19,830	23,874	20,581	18,438
August		15,259	17,031	22,781	19,262
September		16,119	19,222	23,917	16,539
Monthly Average	13,325*	17,889	20,151	21,048	18,307

*Three months
**Nine months

TABLE 9

DAILY PERCENTAGE OF WEEKLY TOTAL FOR TRASH COLLECTION

	1968	1969	1970	1971
Monday	5.6%	4.6%	9.4%	9.9%
Tuesday	5.5	5.3	10.3	10.3
Wednesday	58.5	54.2	48.1	46.7
Thursday	13.7	14.8	14.9	15.7
Friday	6.9	7.9	13.4	15.0
Saturday	9.7	13.2	3.9	2.4
Total	100.0%	100.0%	100.0%	100.0%

As can be seen, Saturday collections are quite small and are dropping, and there is a trend toward more balanced collection for the remainder of the week. Wednesday still remains the principal trash collection day, however, increased trash collection on Monday, Tuesday, Thursday, and Friday suggests that vagrant wastes and street litter, which are collected primarily on these days, may be increasing. All other productivity data appear in Table 7.

5.1.2: Litter Control Division: Duties and Level of Service

This Division is responsible for the inspection, notification, citation, and removal program covering general litter and high weeds on private property. As of December 1, 1972, the Division has been responsible for handling junked automobiles. From the Department's Annual Report:

> "The basic function of the Division is to serve as the primary instrument of municipal government for influencing the establishment and maintenance of high standards of cleanliness of grounds in those locations where litter is deemed excessive for the over-all-welfare of the citizens."

The Division does not actually perform any solid waste collection, but rather oversees solid waste removal through its inspection programs and its quasi-regulatory powers.

5.2: Street Operations

Only one "solid waste" function is performed by Street Operations, and that is street cleaning. Other functions which are the responsibility of Street Operations involve street maintenance and repair, and flood control.

5.2.1: Street Cleaning Division

Duties and Level of Service

This Division is responsible for cleaning (sweeping, flushing, mowing, etc.) all thoroughfares, streets, alleys, rights of way in Dallas along with the sidewalks, plazas, and other public gathering places in the Central Business District. Litter and weed control on public property and the removal of roadway spillage is also the responsibility of the Division. Also, plans have been developed for emergency response to snow, ice, and high water conditions, as well as other natural and civil emergencies. Special requests for service are handled if possible, and Table 10 presents data for October, 1972. (A Management Information System has just been developed for this type of data.)

The Division is also responsible for the Department's leaf pick-up program, which begins each year around October 15. In addition, the street cleaning crews are responsible for the placement of 200 open-top litter barrels throughout the City and the removal of their contents twice a month.

TABLE 10

STREET CLEANING DIVISION REQUESTS FOR SERVICE
(One Month - October, 1972)

Alley Cleaning	21
Street Cleaning	52
Right of Way Cleaning	54
Weed Removal	14
Roadway Hazards	399

Manpower/Equipment Allocations

The Division reports that a systematic cleaning schedule has been developed which "insures that the entire City is swept at least once a month." With over 5,800 miles of streets and alleys, the street cleaning crews must work over 10,000 lane-miles per month. Approximately 230 employees are authorized, and the Division's 103 pieces of equipment consist primarily of sweepers, vacuums, flushers, and tractor mowers. Table 4 summarizes the manpower/equipment allocations. The entire City is made up of 33 street cleaning routes. Some of the routes (principally in the downtown, Central Business District) receive more than "once a month" service. In fact, some routes are traversed by five or six mechanical sweepers daily. In addition, the streets and sidewalks of the downtown Central Business District are hand swept and water flushed every night of the week (including Sunday) by a special night crew of about 50 employees.

Efficiency/Productivity

For the month of October, 1972, the Division reported that 11,343 miles of streets and 915 miles of street rights-of-way were cleaned. There were, however, several sections of the City which received little, if any, service during that month. At any rate, the above reported data is equivalent to approximately 150,000 miles annually.

The Department budgeted $1.78 million to this function of which $1.17 million (or 66%) was allocated to labor costs. This works out to just under $12 per mile/year, and an annual per capita cost of $2.11. Once again, Table 7 summarizes the efficiency/productivity data for the Street Cleaning Division.

Future Prospects

Most of the Division's innovative efforts seem to be concentrated in its mowing operations. A program has been set up to replace its old, worn tractors. Several of the new tractor mowers are "flail" type in order that the Division can assess the feasibility of the new type mower. In an attempt to cut labor costs, several herbicide sprayers will be used in the future to suppress plant growth around guard rails, utility poles, etc., where mowers cannot reach.

5.3: Quality of Service

The quality of service provided to the residents of Dallas is very high, a fact which is strongly supported by the cleanliness of the City. It is noted in the section of this chapter discussing the inner city that this may not be the case in certain areas, and this allegation will be discussed at that point. By and large, however, the City is exceptionally litter free and the Department of Street and Sanitation Services responds rapidly to all complaints and requests.

Complaints of sanitation services are received at two locations in the City: at the Action Center which is in the City Hall, and at the Communications Center in the offices of the Department. Most complaints are received at the Communications Center, but those that are not are transmitted by a Telautograph (Facsimile) machine from the Action Center. It is estimated that in excess of 500 calls per day are received, which include requests to start service, where to place containers, requests for street repair, and requests for dead animal collection, as well as normal complaints. To provide this link with the customers, the Center is manned by five telephone clerks and nine dispatchers.

Table 11 presents the fraction of calls to the Communications Center during FY 1971-72 which were related to solid waste management activities. Dead animal collection calls occur with the greatest frequency, representing about fifty percent of the requests. Of interest is the behavior of the incidence of complaints about the collection service fee when this system was initiated in January, 1972. The number of these complaints started before the system was implemented, peaked out in the month following implementation, and then dropped to a mid-summer low. It is enlightening to observe the time rate of change of attitute resulting from a system impact such as the implementation of a user fee.

Actual complaints about the quality of service cannot be separated from the figures presented in Table 11 since many of these calls represent requests for service rather than complaints. Taking the garbage collection calls as a "worst case" index, the complaints are therefore less than or equal to .019 percent of the average number residential services performed in a month.

TABLE 11

REFUSE CALLS RECEIVED BY THE COMMUNICATIONS CENTER DURING FY 1971-72

	Oct. '71	Nov. '71	Dec. '71	Jan. '72	Feb. '72	Mar. '72	April '72	May '72	June '72	July '72	Aug. '72	Sept. '72	Annual Totals	Monthly Averages
Garbage Collection Service	339	336	380	371	268	434	377	417	500	363	597	337	4,719	393
Trash Collection Service	154	204	104	172	460	1,313	506	695	1,062	1,060	657	337	6,724	560
Dead Animal Collection	2,318	2,131	2,218	1,929	1,983	2,402	2,273	2,403	2,740	2,793	3,175	2,251	28,616	2,384
Crew Service	145	128	134	175	194	190	156	156	143	132	151	126	1,830	152
Collection Service Fee	-	-	150	3,332	3,750	3,140	1,583	639	492	496	385	596	14,563	1,213
Total Calls and Complaints	2,956	2,799	2,986	5,979	6,655	7,479	4,895	4,310	4,937	4,944	4,965	3,647	56,552	4,712

5.4: Turnover, Tenure, and Absenteeism

The Personnel Department of the City of Dallas maintains active records on departmental turnover on a monthly basis. In addition, tenure data was provided for the Department of Street and Sanitation Services with a special computer run. The Department of Street and Sanitation Services maintains their own absenteeism data on a weekly basis.

5.4.1: Turnover

The Department of Street and Sanitation Services terminates approximately 71 employees a month within the Sanitation Division. The monthly and annual turnover averages are about 6.7 percent and 81 percent respectively and are quite high when viewed in this perspective. Table 12 presents the number of terminations and the number of new appointments for each month during FY 1971-72.

Terminations generally appear to be high in the summer months and low in December and the spring, but without any longitudinal data, it is difficult to detect any definite trend. Table 13 indicates the various reasons laborers leave their job. Unfortunately, the largest category, Dismissal Other, is too general and does not supply us with detailed information. It is strongly suspected that most of the terminating personnel in this category simply failed to show up for work. However, the reasons of Health, Another Position, or Leaving the City are significant explanatory variables.

Table 12 also reveals the number of new appointees by their racial or ethnic backgrounds. Surprisingly, 52.3 percent of all new unclassified employees are black. Chicano appointments represent 9.7 percent of all new laborers hired, and white laborers represent 38.0 percent.

TABLE 12

MONTHLY TURNOVER DATA FOR SANITATION EMPLOYEES, FY 1971-72

Month	Worker Class	Total # Employees	Number Terminations	Number of Appointments			
				Total	White	Black	Chicano
Oct. 71	1 (classified)[1]	1049	1	1	-[3]	-[3]	-[3]
	2 (unclassified)[2]		71	84	41	37	6
Nov. 71	1	1072	1	7	-	-	-
	2		69	70	26	38	6
Dec. 71	1	1078	1	2	-	-	-
	2		36	43	21	14	8
Jan. 72	1	1139	1	-	-	-	-
	2		48	48	22	21	5
Feb. 72	1	1065	1	6	-	-	-
	2		77	51	23	24	4
March 72	1	1031	2	1	-	-	-
	2		81	45	13	28	4
April 72	1	1006	1	1	-	-	-
	2		45	38	18	15	5
May 72	1	1033	4	-	-	-	-
	2		40	90	35	44	11
June 72	1	1090	4	4	-	-	-
	2		115	95	30	53	12
July 72	1	1061	2	3	-	-	-
	2		49	79	26	47	6
August 72	1	1025	6	5	-	-	-
	2		123	91	26	58	7
Sept. 72	1	1028	4	4	-	-	-
	2		97	79	28	46	5
Average	1	1056	2.3	2.83	-	-	-
	2		70.9	67.75	25.75	35.42	6.58

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[1] Classified employees are generally managerial, secretarial, and skilled employees.

[2] Unclassified employees are generally non-skilled.

[3] Race data was not available.

TABLE 13

TYPE OF TERMINATIONS FOR UNCLASSIFIED EMPLOYEES FOR THE MONTHS OF OCTOBER, JANUARY, APRIL, AND JULY - FY 1971-72

TYPE OF TERMINATION	REASON FOR LEAVING	OCT. 71	JAN. 72	APRIL 72	JULY 72	TOTAL OF FOUR MONTHS	% OF TERMINATIONS FOR THOSE MONTHS
Resign	Leaving City	3	7	-	1	11	5.2
	Another Position	13	7	10	6	36	16.9
	School	2	-	-		2	1.0
	Health	3	-	3	4	10	4.7
	Dissatisfied with job	-	1	1	3	5	2.4
	Other	4	2	2	2	10	4.7
Dismissal	Health	-	-	-	1	1	.5
	Dissatisfied with job	1	-	-	-	1	.5
	Other	45	29	28	32	134	62.9
Retirement		-	-	1	-	1	.5
Disability	Health	-	1	-	-	1	.5
Death		-	1	-	-	1	.5
TOTAL		71	48	45	49	213	---

5.4.2: Tenure

Table 14 illustrates the number of years in which Sanitation Division (collection, disposal, litter control) employees have been employed by the City of Dallas. Grades 04 through 22 are classified positions, and grades 54 through 65 are unclassified or laborer positions. For our purposes, the interesting grade is number 56, Sanitation Crewman or Truck Driver Tandem Axle and Semi-Trailer. Predominantly, this class is composed of sanitation crewmen. The percentage of employees within this classification with less than one year tenure is 52.8 percent. It is within this class that most of the turnover within the Sanitation Division occurs. Therefore, the magnitude of the turnover problem discussed in the preceding section is less than indicated. It is a relatively small group of emememployees continually turning over, which yields such a high divisional turnover figure.

5.4.3: Absenteeism

The Department of Street and Sanitation Services maintains data on the percentage of workers absent on a weekly basis. These statistics are graphed in Figure 4. It is interesting to note the downward trend in the first quarter of the fiscal year, resulting at a yearly low during the last week of December. The reason for this trend has two probable causes. First, workers try to accumulate capital for the holiday season, which they can only do by working each day. The second reason is that workers must report to work the day before and after a holiday (except for annual leave) in order to be paid for the holiday. Thus, there is an added financial incentive to come to work during this period.

The relatively low figures for the weeks in June are not readily explainable. Turnover was very high for that month and perhaps the new employees were more conscientious of their duties.

5.5: Inner City

Within the boundaries of the City of Dallas there is no specific area which is referred to as the "ghetto" or "inner city" area. However, a review of the median income of census tracts within the city reveals a

TABLE 14

CITY OF DALLAS
EMPLOYMENT DISTRIBUTION BY YEARS OF SERVICE
DEPARTMENT OF STREET AND SANITATION SERVICES
SANITATION DIVISION

11/28/7

	YEARS OF SERVICE																				OVER	
GRADE 1/	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20	FIEL BLAN
04	2	1	2	1																		
05	5	7	3		1																	
06	2	1	2		2	1	1															
07	14	4	8	4	10	3	1	5	4	5	1	2	2	1	2	1	2	3	1	1	7	
08			3	3	2	1	1	2	2	5		2		3	2	4	2		2	1	10	
09	2	2	2	1		1	1	1	1		1			2				2			5	
10	1	1		1	1				3			2	1	1	2	1	1		1		4	
11				1	1	1		1	1		2						1	1			1	
12	1	2																				
13											1	1									3	
14					1																	
15	2																					
16	1					1																
17													1									
19																				1	1	
22										1												
TOTAL	30	18	20	11	18	8	4	9	11	11	5	7	4	7	6	6	6	6	4	3	31	
35		1																				
45		1																				
TOTAL		2																				
54	8	3		6	1	1	1	1	3	1	1	1		2			1	1			2	
55					1										1							
56	266	82	45	30	20	10	8	6	7	7		3	2	1	3	2	2	2		2	6	
57	8	6	1	2	1	2	1		1			1				1					3	
61	11	16	18	12	16	9	15	2	8	6	6	1	5	1	2	3	3	5	1	1	12	
62		1	1																			
63	9	12	13	7	6	1	6	1	1	4	2		1	2				1			2	
64		1																				
65	1			1	4				1													
TOTAL	303	121	78	58	49	23	31	10	21	18	9	6	8	6	6	6	6	9	1	3	25	
	333	141	98	69	67	31	35	19	32	29	14	13	12	13	12	12	12	15	5	6	56	
FINAL	333	141	98	69	67	31	35	19	32	29	14	13	12	13	12	12	12	15	5	6	56	

1/ Grade classes described on following page.

TABLE 14 (Continued)

Grade	Job Classifications
Classified	
04	Clerk 4
05	Clerk 5
06	Clerk 6
07	Sanitation Area Leadman, Automotive Equipment Operator
08	Clerk 8, Carpenter 8, Foremen 8
09	Sanitation Area Foremen, Sanitation Special Services Supervisor 9
10	Operations Analyst, Administrative Assistant, Sanitation Area Foreman
11	Customer Services Supervisor, Assistant Sanitation District Supervisor 11
12	No Job Classification (NJC)*
13	Sanitation District Supervisor 13
14	NJC
15	Assistant Sanitation Services Superintendent 15
16	NJC
17	Sanitation Services Superintendent 17
19	NJC
22	NJC
35	NJC
45	NJC
Laborer	
54	Watchman, Laborer A, Spotter, Disposal Site
55	NJC
56	Sanitation Crewman, Truck Driver Tandem Axle and Semi-Trailer
57	Mechanical Aid D, Rotoboom Truck/Trailer Driver
61	Sanitation Crew Chief A
62	NJC
63	Sanitation Crew Chief B, Sanitation Animal Truck Driver
64	Carpenter Rough
65	Transfer Operations Trailer Driver 65

1) Certain categories of employees did not have a job description. For classified employees, this was generally top level management.

Source: Personnel Department, City of Dallas

* No Job Classification

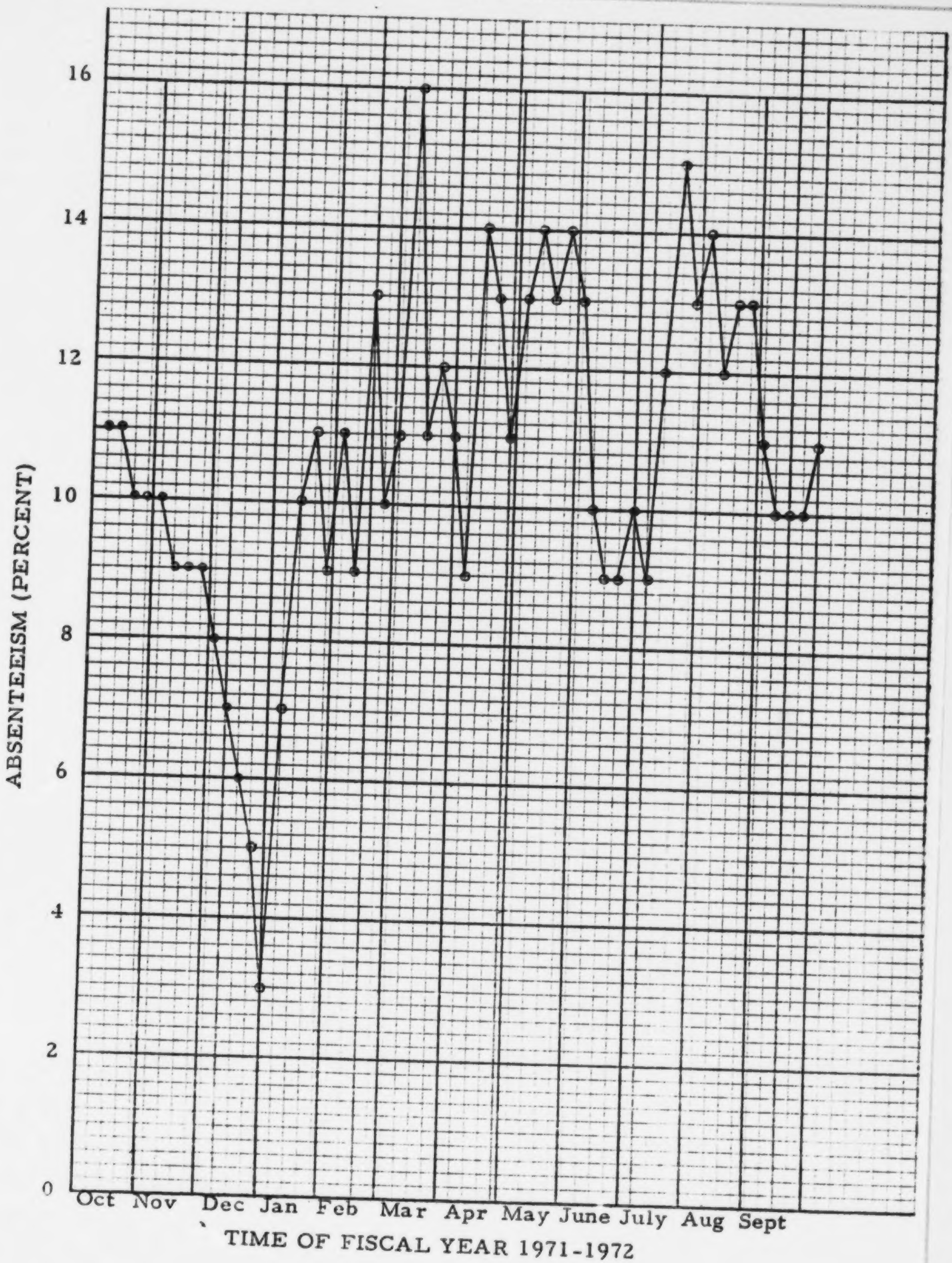


FIGURE 4: ABSENTEEISM VS TIME OF YEAR

fairly large low-income area. Figure 5 illustrates the census tracts in the city for which the median income is less than $3,999. This area is commonly referred to as South Dallas and had a total 1970 population of 133,415 people.

The Department of Street and Sanitation Services does not provide any special services in this area. The normal collection of two pickups per week is provided, and there do not seem to be any collection problems associated with this service. However, recent litter legislation has been enacted to improve the condition of vacant lots in this area as well as in the remainder of the city.

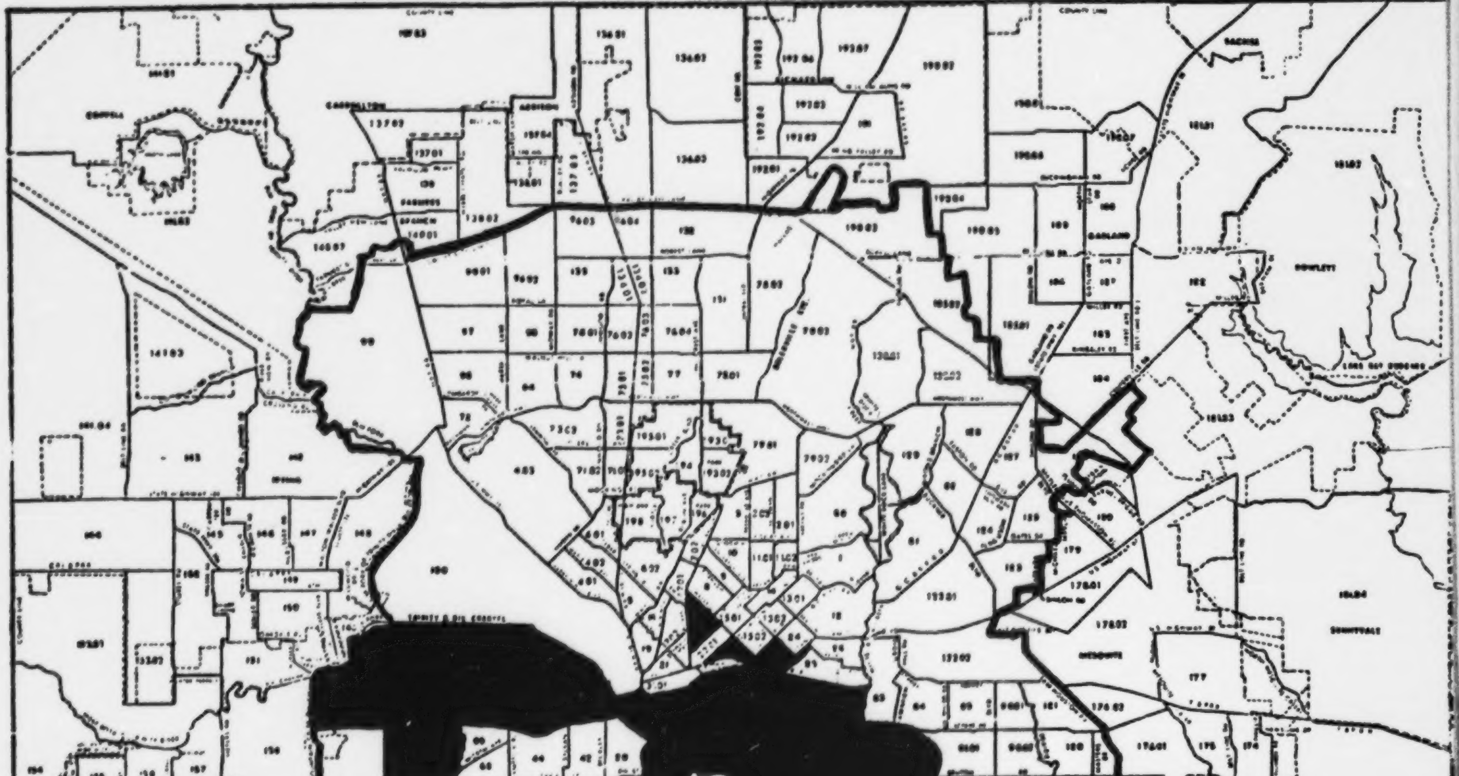
There have been comments from two different sources that the quality of service in South Dallas is not as high as in the other areas of the city. The Southern Christian Leadership Conference feels that the Department neglects South Dallas in their collection activities as service is not provided regularly. In addition, according to the Committee on Environmental Quality of the League of Women Voters, the citizens in this area have had many complaints about the level and quality of service.

Without a personal survey of collection activities in all of Dallas, it would be difficult to resolve this question. A possible explanation is that the Department does discriminate against the citizens in South Dallas by providing irregular collection. This is the view held by the Southern Christian Leadership Conference. On the other hand, the problem may be the result of citizen apathy toward proper solid waste storage techniques. If waste is not stored correctly, the sanitation crews could refuse to collect, a situation which would precipitate claims of partial service. The question of fault becomes very complicated under this type of constraint and, to date, no one has called for the services of a fair witness.

5.6: Disposal Methods - Present and Planned

The Disposal Division of the Department of Street and Sanitation Services practices sanitary landfill for disposal of solid waste. All waste types, with the exception of certain hazardous materials, are accepted at the

DALLAS COUNTY
CENSUS TRACT MAP
1970



* The darkened area consists of 34 census tracts and denotes the areas with less than $3,999 annual median income.

FIGURE 5: CENSUS TRACTS WITHIN THE CITY OF DALLAS WITH A MEDIAN INCOME OF OF LESS THAN $3,999 ACCORDING TO THE 1960 CENSUS.

disposal sites. Until quite recently, waste petroleum oil was allowed, but it was decided that this material was too toxic and flammable for landfill disposal.

Actual tonnage records are kept only for mixed residential refuse hauled by City vehicles. Trash hauled by the City and miscellaneous refuse hauled by private firms are recorded by cubic yards which are recalculated in terms of tonnage by survey. Compacted landfill density is estimated to be approximately 1000 pounds per cubic yard.

There are now ten sanitary landfill sites being operated by the City. The names, average disposal rate, and estimated remaining lifetimes are presented in Table 15. Figure 6 indicates that all locations currently lie within the Dallas City limits. All sites are located on private property, usually at no cost to the City, because most owners desire the fill. All disposal operations, however, are the responsibility of the Disposal Division.

TABLE 15
DALLAS DISPOSAL SITE DATA

Sites		ESTIMATED ON OCTOBER 31, 1971			ESTIMATED ON APRIL 30, 1972		
		Capacity[1/] Prepared	Fill Rate CY/Day	Completion Date	Capacity Prepared	Fill Rate CY/Day	Completion Date
Walnut Hill Public Site	1	223,000	2,600	April 1976	114,000	2,500	Jan. 1976
South Loop Public Site	2	390,700	2,000	May 1983	354,900	1,500	May 1983
Second Avenue City Site	3	678,200	770	March 1974	533,600	800	Jan. 1974
Pinnel City Site	4	107,700	635	May 1973	59,000	635	May 1973
Kiest City Site	5	133,000	600	Oct. 1975	108,100	550	Oct. 1975
Elam City Site	6	61,900	400	Nov. 1988	27,300	475	Sept. 1972
Davis City Site	7	87,900	375	Oct. 1973	46,000	325	Oct. 1973
W. Dallas Site	8	36,700	200	Sept. 1975	7,600	150	Sept. 1975
Killough Site (Brush)	9	5,400	60	Sept. 1973	14,800	100	July 1973
Linfield (Brush)	10	NA	NA	NA	NA	NA	NA
Overall Totals [2/]		1,724,500	7,640	226 Days	1,265,300	7,035	180 Days

[1/] The site capacity, in cubic yards, that could be used if site preparation activities such as clearing and excavation were to be temporarily discontinued.

[2/] Neglecting the Linfield brush site.

The Disposal Division has a current authorized manpower strength of 135 positions including a Superintendent, an Assistant Superintendent, and two District Supervisors. Not all positions are filled, as indicated by Table 16, which presents detailed personnel strength for fiscal years 1970-71, and 1971-72. The upward shift in classified personnel coupled with the downward

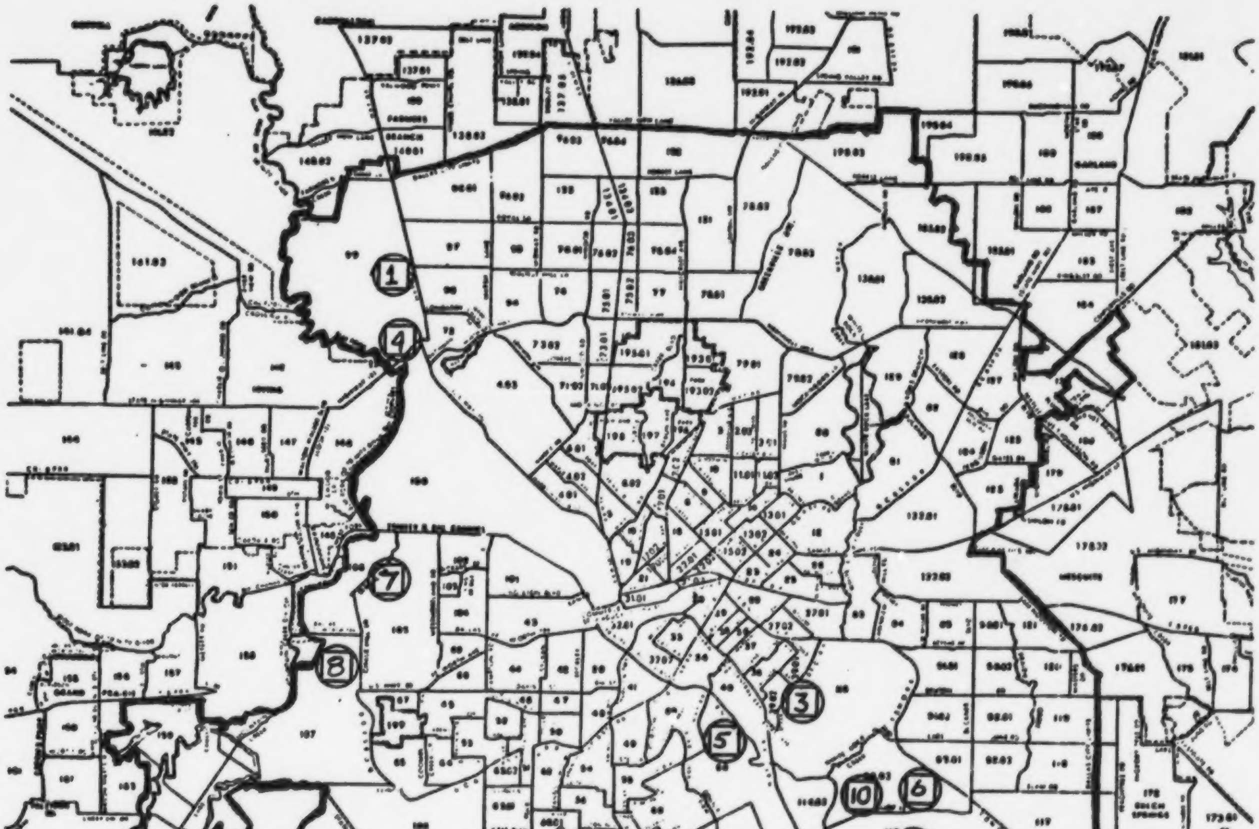


FIGURE 6: DISPOSAL SITE LOCATIONS IN THE CITY OF DALLAS

TABLE 16

AUTHORIZED POSITIONS, DISPOSAL DIVISION

	FY 1970-71	FY 1971-72	Change	Percent
Personnel Strength at the End of the Year				
Classified Personnel				
Disposal Superintendent	1	1	0	
Asst. Disposal Superintendent	1	1	0	
Administrative Supervisor	0	1	+ 1	
Disposal District Supervisor	2	2	0	
Accountant	0	1	+ 1	
Party Chief	0	1	+ 1	
*Disposal Foremen	7	8	+ 1	
*Equipment Operator 8	36	40	+ 4	
*Equipment Operator 7	17	11	- 6	
Instrumentman	0	1	+ 1	
Clerk	1	1	0	
Draftsman	0	1	+ 1	
Toll Attendant	0	9	+ 9	
Chainman	0	0	0	
Total	65	78	+13	+20.0
Unclassified Personnel				
Trac. Crl. 80 HP Less	3	1	- 2	
Mech. Aide D	5	4	- 1	
Weighman Tr. Scales	5	5	0	
Oper. Trainee A	3	3	0	
Spotter Disposal Site	24	18	- 6	
Watchman	11	10	- 1	
Total	51	41	-10	-19.6
Total Division	116	119	+ 3	+ 2.5
Disposal Equipment				
Compactors	7	7	0	
Draglines	4	4	0	
Graders	2	2	0	
Turnapulls	8	9	+ 1	
Turnadozers	5	5	0	
F.E. Tractors	12	11	- 1	
Bulldozers	3	3	0	
Total	41	41	0	0

*Classified 11-14-71

shift in unclassified personnel indicate that the newly created Toll Attendant job absorbed some men from the spotter positions. Toll Attendants became a necessity when the City initiated a disposal charge earlier this year.

Disposal Division personnel operate 41 different pieces of equipment which are described in Table 17. Some of these machines are not assigned to any particular site; they are manned by two district mobile crews which travel from site to site performing trenching operations. This practice fully utilizes the rather expensive heavy equipment required for trench landfill techniques.

Of the ten landfill sites being operated by Dallas, eight are restricted for city collectors and residents. Two of these are city brush sites. The remaining two sites are public and will accept waste from any hauler, including private sector collectors. These firms are encouraged to use the public disposal facilities inasmuch as the user charge system introduced in January of 1972 provides a substantial income to the city.

Table 18 presents the annual disposal activities for fiscal years 1970-71, and 1971-72. Data of Table 18 indicates that disposal of refuse hauled by city vehicles increased slightly during this two year interval, but that refuse from other sources declined significantly. This observation for non-city disposal is explained by the implementation of the fee system, which apparently forced some private collectors to seek other sites. This trend is further supported by a drop from 67,057 to 44,278 tons delivered to public sites by private firms for the months of December 1971, and January 1972. Since the first of the year, however, private sector deliveries have been slowly rising, which may indicate that the city is competitive with its fee schedule, and that some private firms acknowledge the convenience of the City operation.

Table 19 presents disposal costs for all of the landfill operations during fiscal years 1970-71, and 1971-72.

TABLE 17

NORMAL LOCATION OF DISPOSAL EQUIPMENT 1972

Northwest District

Walnut Hill

7978 Cat F.E. Loader 977
9941 Int. Bulldozer TD 25
0945 Cat F.E. Loader 983
0946 AC Tractor HD16DP
1919 Cat F.E. Loader 983
1929 Hyster Compactor C 451A
2974 Cat Compactor 862B

Mobile

9920 Maintainer Galion 104HB
9935 Turnapull Letourneau D
9937 Turnadozer Letourneau C
9942 Northwest Dragline 2 yd.
0962 Turnapull Letourneau D
0963 Turnapull Letourneau D
1928 Turnadozer Letourneau C
2927 Turnapull, Wabco
2973 Turnapull, Wabco
2980 Koehring Dragline 1 yd.

Pinnell

2969 Cat F.E. Loader 983
2977 Cat Compactor 826B

Nomas

7979 Cat F.E. Loader 977

West Davis

0943 AC F.E. Loader 12 G

Southeast District

South Loop

0944 Cat F.E. Loader 983
0947 AC Tractor HD16DP
2970 Cat F.E. Loader 983
2975 Cat Compactor 826B
2978 Cat Compactor 826B

Mobile

8923 Maintainer Huber 10D
9934 Turnapull Letourneau D
9936 Turnadozer Letourneau C
0959 Turnadozer Letourneau C
0960 Turnapull Letourneau D
0961 Turnapull Letourneau D
2971 Turnapull, Wabco
2979 Koehring Dragline, 1 yd.
2981 American Dragline, 2 yd.

Second Avenue

7984 FWD Compactor SF-17
1918 Cat F.E. Loader 983

Kiest

0942 AC F.E. Loader 12 G
2976 Cat Compactor 826B

Brush Sites

9938 Turnadozer Letourneau C

Elam

1935 Cat F.E. Loader 983

TABLE 18

DALLAS ANNUAL DISPOSAL ACTIVITIES

	FY 1970-71	FY 1971-72	Change	Percent
Refuse Hauled by City to Sanitary Landfills (Tons Weighed)				
Second Avenue	113,557	108,969	- 4,588	- 4.0
Pinnell	97,557	92,660	- 4,897	- 5.0
Kiest	83,858	90,873	+ 7,015	+ 8.4
Elam	46,098	72,627	+ 26,529	+ 57.5
Davis	62,151	48,006	- 14,145	- 22.8
W. Dallas	6,869	5,169	- 1,700	- 24.7
Sub-Total	410,090	418,304	+ 8,214	+ 2.0
Refuse Hauled by City to Trash Sites (Tons Calculated from CY Fill Consumed)				
Walnut Hill	115,438	104,128	- 11,310	- 9.8
South Loop	29,646	60,647	+ 31,001	+104.6
Linfield [1]	11,435	10,532	- 903	- 7.9
W. Dallas	16,198	26,652	+ 10,454	+ 64.5
Coit [2]	10,958	17,799	+ 6,841	+ 62.4
Highland [2]	23,575	0	- 23,575	0
Killough [1]	7,656	11,266	+ 3,610	+ 4.7
Total Refuse Hauled by City (Tons)				
	624,996	649,328	+ 24,332	+ 3.9
Refuse Hauled by all Others to Sites (Tons Calculated from CY Fill Consumed)				
Second Avenue	12,723	8,858	- 3,865	- 30.4
Pinnell	2,943	0	- 2,943	0
Kiest	0	5,471	+ 5,471	0
Davis	16,592	12,018	- 4,574	- 27.6
W. Dallas	5,546	2,812	- 3,734	- 57.0
Walnut Hill	436,632	381,769	- 54,863	- 12.6
South Loop	303,056	242,415	- 60,641	- 20.0
Linfield [1]	25,295	1,713	- 23,582	- 93.2
Highland [2]	1,200	0	- 1,200	0
Total Refuse Hauled by Others (Tons)				
	804,987	655,056	-149,931	- 18.6
Total All Refuse Received at All Sites (Tons)				
	1,429,983	1,304,384	-125,599	- 8.8
% Other	56.3	50.2	- 6.1	
Average Tons Per Day	3,918	3,564	- 354	

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[1] Brush Sites

[2] No Longer Used

TABLE 19
DALLAS DISPOSAL COSTS

Record of Costs Per Site, Unit Cost Per Ton By Site				
Public Trash Sites	FY 70/71	FY 71/72	Charge	Percent
Walnut Hill	$ 0.94	$ 1.30	$+ 0.36	+ 38.3
South Loop	1.17	1.40	+ 0.23	+ 19.7
Linfield [1]	1.89	4.06	+ 2.17	+114.8
Average (weighted)	$ 1.06	$ 1.37	$+ 0.31	+ 29.2
City Landfill Sites				
Second Avenue	$ 1.35	$ 1.39	$+ 0.04	+ 3.0
Pinnell	1.21	1.50	+ 0.29	+ 24.0
Kiest	1.30	1.29	- 0.01	- 0.8
Elam	1.34	1.15	- 0.19	- 14.2
Davis	1.36	1.74	+ 0.38	+ 27.9
W. Dallas	1.82	1.55	- 0.27	- 14.8
Average (weighted)	$ 1.34	$ 1.41	$+ 0.07	+ 5.2
City Brush Sites				
Coit [2]	$ 0.94	$ 1.03	$+ 0.09	+ 9.6
Highland [2]	1.45	0	0	0
Killough	0.89	1.78	+ 0.89	+100.0
Average (weighted)	$ 1.22	$ 1.47	$+ 0.25	+ 20.5
City Average	$ 1.16	$ 1.39 [3]	$+ 0.23	+ 19.8
Expenditures				
Total	$1,653,775	$1,808,061	$+154,286	+ 9.3
% Personnel	49.01	52.08	+ 3.07	
% Vehicles	45.87	43.29	- 2.58	
% Other	5.12	4.63	- 0.49	

[1] Now being used as a city brush site

[2] No longer used

[3] Cost per ton would have been $1.31 without the $104,018 spent on the Fee System.

Note: The above cost includes all overhead distributed on a tonnage basis.

These costs also include the expense of implementing the user charge system. Excluding City brush site operations, the lowest costs in fiscal year 1970-71 were obtained at the two public sites which disposed the large non-city refuse volume in addition to city waste. Although these low costs are not as significant during the following year, the values do lie below the total site averages. The more favorable costs being found at the public sites should not suggest that the other sites are not operated as well; rather the public sites receive more waste for the fixed manpower/equipment assignments.

The City is initiating some recycling programs. The only one performed during the disposal operation is a pilot plant for the recovery of ferrous metals. About $600.00 was recovered during the first month's operations, but the program cost is not known so a cost/benefit comparison cannot be made.

There are three problems that the Disposal Division must deal with. First, the available site lifetimes are short. Second, there is a large fleet of heavy equipment required for the operation of the ten disposal sites. Third, there is a high local water table which is certain to cause leachate problems. The City is addressing all three of these conditions on a priority basis.

The leachate problem cannot be inexpensively solved by technical means. The City has taken steps to prohibit the disposal of certain wastes (waste oils), but cannot easily expand the list to include other hazardous materials. This problem may be alleviated with the simultaneous solution of the landfill site requirements. The large fleet required for disposal operations may also find partial solution by the procurement of a smaller number of larger sites.

The Department of Street and Sanitation Services is working to locate disposal sites to meet future needs. Potential sites are being considered exterior to the City limits in the northwestern, northeastern, and southeastern corners of the County. The Department is confident that site procurement will not be difficult but, nevertheless, is proceeding at a fairly unobtrusive level. It is suspected that the City will purchase large tracts of land in the relatively near future for use in the next decade.

5.7: Equipment Description

The Department of Street and Sanitation Services in Dallas maintains approximately 240 "garbage trucks" for the collection of mixed refuse. Only 219 pieces of this equipment are used on a normal collection day, with the other vehicles being maintained as spare trucks. Table 20 presents the number and type of vehicles the Department uses in their collection operations. Sixty-two of the 20-cubic yard side loading packers have been modified for step-in operations so that they may be operated by two-man crews. The Department plans to eventually have all their side loaders converted for two-man operation. The Department also operates autos for supervisory personnel.

TABLE 20

NUMBER AND TYPE OF VEHICLES USED IN RESIDENTIAL AND COMMERCIAL COLLECTION

NUMBER	DESCRIPTION OF VEHICLE
3	One Cubic Yard Cushman Scooters
5	10 Cubic Yard "Pak Rats" (Packers)- Side Loading
6	10 Cubic Yard Open top "Bobtails"
7	35 Cubic Yard Open top 6 wheel trailers
55	16 Cubic Yard Side Packers
2	20 Cubic Yard Packers-Rear loading with 3 c.y. hopper
25	20 Cubic Yard Packers-Rear loading
116	20 Cubic Yard Packers-Side loading

219[1] Total

[1] A breakdown of the spare equipment was not available.

In addition, the Department operates 63 pieces of trash removal equipment as described in Table 21. This equipment is used to collect brush, garden waste, and large bulky items. Eight of the 35 cubic-yard trailers are assigned to the rotoboom bulky waste loaders.

TABLE 21
NUMBER AND DESCRIPTION OF TRASH VEHICLES

NUMBER	DESCRIPTION OF VEHICLE
7	10 Cubic Yard Open Top "Bobtails"
40	35 Cubic Yard Open Top 6 Wheel Trailers
8	Clamshell Rotobooms
8	5 and 10 yard Open Top Dump Trucks
63	Total

A detailed breakdown on the number and type of disposal equipment is presented in the disposal section of this chapter. Section 5.8.1 provides basic information on the costs of equipment operated at the landfills.

5.7.1: Financing and Cost

The Department of Street and Sanitation Services rents its motor vehicle equipment from the Department of Equipment and Automotive Services. The rental rate is based on the cost of operation plus a depreciation expense. Depending upon the vehicle, the expenses are either calculated on a per-mile or per-hour rate. These rates for various pieces of equipment operated by the Department are presented in Table 22. As can be seen, the cost varies considerably by the type of equipment utilized. The proposed rental increments reflect the rising costs of both operating and replacing equipment. Rising replacement costs are especially apparent for heavy disposal equipment.

TABLE 22

CURRENT AND PROPOSED OPERATING AND DEPRECIATION RATES FOR VARIOUS TYPES OF EQUIPMENT

EQUIPMENT DESCRIPTION	OPERATING RATE		DEPRECIATION		TOTAL RATE	
	Current	Proposed	Current	Proposed	Current	Proposed
Passenger Car - A. C.	$ .065 pm	$ .065 pm	$ .035 pm	$ .0475 pm	$ .10 pm	$ .1175 pm
2 Ton Truck - Service and Dump	.155	.165	.060	.065	.215	.23
3 Ton Truck - Service and Dump	.210	.280	.075	.085	.285	.365
Trash - Trailer - 30 yd.	.220	.250	.065	.105	.285	.355
Garbage Packer Truck - 20 yd.	.330	.360	.115	.170	.445	.530
Garbage Transfer Truck - Trailer	.300	.350	.250	.430	.550	.780
Street Flusher	1.35 PH	2.00 PH	.60 PH	.90 PH	1.95 PH	2.90 PH
Street Sweeper	4.25	4.50	1.50	1.50	5.75	6.00
Dragline - 1/2 yd with operator	7.00	8.00	2.00	2.35	9.00	10.35
Dragline - 3/4 yd with operator	5.50	5.50	2.50	4.50	8.00	10.00
Dragline - 1 yd with operator	6.00	6.00	3.00	4.50	9.00	10.50
Dragline 2 yd - no operator	6.50	7.50	4.50	7.75	11.00	15.25
1/2 yd loader	1.00	1.00	.50	.67	1.50	1.67
1-1/2 yd loader	2.50	3.00	1.50	1.50	4.00	4.50
Leaf Machine	1.50	1.50	.75	.90	2.25	2.40
Turnapull - Landfill	5.50	5.00	2.50	3.50	8.00	8.50
Landfill Compactor	5.00	5.00	4.50	6.30	9.50	11.30
Landfill Frontend loader - 4-1/2 yd	6.00	7.50	5.00	5.83	11.00	13.33
Landfill Frontend loader - 2-1/2 yd	5.00	6.00	2.75	3.86	7.75	9.86
Trailer Mounted Frontend Landfill 1-1/2 yd	2.50	3.00	2.00	2.50	4.50	5.50
Bulldozer - Track Mounted 700 h. p.	5.50	5.50	2.50	5.00	8.00	10.50

5.7.2: Maintenance Policy

The preventive maintenance procedures for the vehicles are performed at the four storage areas or garages. Each driver checks his vehicle every morning and has it repaired immediately if he finds anything wrong. Every eight days each vehicle receives a lubrication and/or an oil change depending upon the condition of the vehicle. At this time, there is also a visual examination by the mechanic for any mechanical defects. Every 10,000 miles all four wheels are pulled and the brakes and front-end are checked. In addition to this scheduled maintenance, there is a yearly inspection as required by the State of Texas.

This rigorous maintenance policy has allowed the Department to maintain a relatively small reserve fleet, and each service area generally has no more than five spare packer trucks at any one time. Two labor shifts ensure that servicing will be done promptly each day so that the equipment is not tied up in the repair shop. Vehicles having breakdowns are towed into the shop immediately unless they can be repaired on the road.

5.7.3: Equipment Replacement Policies

The Department of Street and Sanitation Services works closely with the Department of Equipment and Automotive Services when replacing existing rolling stock or expanding the fleet. The Department generally employs a 5-year or 60,000-mile depreciation schedule on major collection vehicles. The decision to replace existing vehicles is made by the head of the Department of Equipment and Automotive Services. This decision is based upon the simple economic rationale of comparing the annual cost of repairs to the depreciated value of the vehicle. When these costs exceed the value of the vehicle, it is disposed by auction through sealed bids.

The decision to purchase additional vehicles is initially made by a Division Head in the Department of Street and Sanitation Services. He carries his request first to the Assistant Director of the Department who, if he agrees, sends it on to the Department Head. The Department Head decides if the additional equipment is necessary. If he agrees, the request is taken to the City Manager who decides on the value of the new equipment and takes the request to the City Council. The Council ultimately decides on the request to purchase additional equipment.

5.8: Financial Aspects of the Dallas Solid Waste System

The municipal solid waste system of Dallas currently relies on one source of revenue for its operations, the General Fund. The fund is generated by various taxes and fees levied by the city government. Although not specifically earmarked for solid waste activities, the current user charges for collection and disposal do represent a substantial source of revenue to the General Fund. The collection fee schedule of $1.50 per month for curbside service and $5.00 per month for carry-out service provides slightly over 60 percent of the revenue required for the solid waste collection operation. The actual collection cost is $2.47 per month per dwelling unit, and plans are being considered to increase the service charge to $2.50 per month per dwelling unit for the basic service within five years. Under this rate structure, the collection operation would be virtually self-supporting even though the operating revenues would continue to flow from the General Fund. The fees obtained from the disposal operation partially defray the costs of these activities.

The budgetary process for the Department of Street and Sanitation Services begins with the Administrative Assistant to the Department head. He aggregates and consolidates the six divisional (street cleaning, street maintenance, river levee maintenance, collection, disposal, and litter control) budgets to form the Department Budget. During the development of the Department Budget, the Administrative Assistant maintains fairly direct contact with the budget office for advice and consultation. In addition, ceilings are imposed and any overruns must be justified. This completed Budget must be approved by the Department Head before it is sent to the City Manager. Accompanying the Department Budget are supporting documents justifying any proposed increases or decreases from the previous year's Budget, an itemized estimate of expense, and an itemization of all anticipated revenue from user charges. The City Manager reviews the Department's Budget, and incorporates it into the City Budget. Both the City and Department Budgets are presented to the City Council for final approval on the

August each fiscal year, and again, supporting documents are transmitted with the actual Budget. The City Council then votes on the Budget for the upcoming, October 1 to September 30, Fiscal Year.

The Department of Street and Sanitation Services rents their vehicles from the Department of Equipment and Automotive Services. This expense is financed through the Operating Budget. The Capital Budget is reserved for large-scale expenditures, such as the purchase of new landfill sites. Currently, the Department has no outstanding long-term debt.

In order to clearly present the financial aspects of the Department of Street and Sanitation Services, this section will be divided into two distinct parts. First, the sources of revenue available to the Department will be presented. This will include a discussion of the current user charge rates. Secondly, information will be presented on the level and type of expenditures made by the Department during their operations.

5.8.1: Sources of Revenue

The ultimate source of funds for the Operating Budget of the Department of Street and Sanitation Services shifted significantly when user charges were initiated on January 1, 1972. For the last fiscal year, the total revenue generated by this new source was $2,867,288. Taxes and other fees supplied an additional $3,338,959 for the Sanitation Collection Division's Operating Budget. Similarly, for the Disposal Division, $650,620 was received from disposal user charges and $1,114,392 from taxes and other fees. The user charge figures, however, represented three-fourths of a fiscal year.

General Fund

Revenue for the general fund is derived through the levy of various taxes and fees upon the residents of Dallas. An ad valorem property tax is the most important source of revenue for this fund. Table 23 presents this tax rate along with the assessed valuation of city property for a number of years. The proportion of the 1971 city tax rate of $1.87 distributed to the General Fund was 63.6 percent. This represented $56,353,903 which is approximately one-half of the total amount of the General Fund.

TABLE 23

ASSESSED VALUE AND TAX RATE ON ALL TAXABLE PROPERTY 1962-71

Fiscal Period	Assessed Value	City Tax Rate	Total Tax Rate [1]
1962	2,549,381,828	1.56	4.56
1963	2,679,774,283	1.56	4.61
1964	2,829,[illegible]8,116	1.60	4.65
1965	2,970,701,574	1.70	4.97
1966	3,127,379,846	1.79	5.44
1967	3,315,265,313	1.79	5.71
1968	3,430,247,616	1.79	5.79
1969	3,625,065,821	1.90	6.04
1970	4,580,379,343	1.75	5.68
1971	4,738,653,833	1.87	5.79

[1] Total tax rate is the summation of the City Tax, School Tax, County Tax, State Tax, Hospital Tax, District Tax, and Junior College Tax.

SOURCE: Annual Financial Report, Fiscal Year 1970-71

The total tax rate represents the summation of the various components which constitute the tax rate structure in Dallas. The other components, besides the City Tax, are generally earmarked for specific purposes such as schools or hospitals. The City Tax has essentially remained as a constant proportion of the total tax rate structure. In 1962 the City Tax represented 34 percent of the total tax structure, and in 1971 it dropped only to 32 percent.

The significant growth in the tax base has made large tax rate increases unnecessary during the past ten years. The assessed property value within the City of Dallas increased by 46 percent between 1962 and 1971. At the same time, the City Tax rate increased by only 20 percent and the total tax rate by 27 percent.

User Charge Contribution

The enabling legislation for user charges, Ordinance 13772 of the City of Dallas, was passed in the fall of 1971. The user charges, which are included on the monthly water bill, were initiated January 1, 1972. This new source of revenue for the General Fund was instituted to avert a tax increase. It was also felt that the initiation of user charges would equalize the service provided to all citizens. Prior to user charges, approximately 11,500 residents received high-level carry-out service. The new user charge system, however, billed carry-out service at a rate considerably higher than curb service and as a result, within nine months, the number of carry-out customers had dropped to 3,500 residents.

This is a very good illustration of the advantage of user charges as a revenue source. As in a free market, people pay for the level of service which they desire, and the price is directly related to the cost of providing that service. This eliminates the subsidization of a group of citizens at the expense of all other residents.

The new City Ordinance specifies charges for both collection and disposal operations. The charge for collection service varies by the type of establishment and the level of service desired. For residences and duplexes, the basic charge is $1.50 per dwelling per month for alley or curb service. Carry-out service is billed at the rate of $5.00 per month. Handicapped persons, however, may obtain this service at the base rate if they meet certain specified requirements. The basic charge for apartments is $1.50 per dwelling per month for alley or curb service, with carry-out service being provided at $4.00 per dwelling per month. Alternatively, the owner of an apartment may elect to be charged on the basis of cost plus 15 percent. The charge for commercial establishments varies by the amount of solid waste collected and by the number of collections made per week. Table 5 illustrates these rates of charge. Again, an owner may wish to select the service at a rate of cost plus 15 percent. For either apartments or commercial establishments, the owner may elect to haul his own waste away or contract to a private hauler.

The disposal charge rates established by the Department of Street and Sanitation Services are illustrated in Table 24.

TABLE 24

DISPOSAL USER CHARGES, 1972

Category	Type Vehicle or Waste	Charge per Load
A	Earth, rocks, and inert material suitable for cover of refuse	No Charge
B	Passenger cars, station wagons, and pickups used by Dallas resident owners to haul owner's waste	No Charge
C	Passenger cars, station wagons, and pickups used by non-Dallas resident owners to haul owner's waste	$ 1.00
D	Commercial Pickups and Panel Trucks and Single Axle Trailers	1.00
E	Trucks, Two Axle with cargo bed length less than 15 feet, or Trailer Two Axle	3.00
F	Trucks, Three Axle or Truck, Two Axle with cargo bed length 15 feet, or greater	5.00
G	Trucks, Semi-Trailers or Roll off Containers	7.00
H	Truck, Compactor, 30 C. Y. or less	9.00
I	Truck, Compactor, Greater than 30 C. Y.	11.00
J	Any load including tires or waste rubber, additional charge per load	3.00

The revenue generated from all user charges in 1971-72 was $3,517,908, and the gross is expected to be $5,600,000 in 1972-73. This latter figure appears to be rather high. Based upon user charge revenue for the three-quarter-year experience, the calculated revenue for a full year would be $4,690,544. This is approximately one million dollars less than the estimated gross revenue figure. Without a significant increase in either rates or customers, it is difficult to reconcile the magnitude of this difference. Using the estimated gross revenue figure, total user charges could finance 61.2 percent of the total direct budgeted collection and disposal costs. With the calculated figure, user charges represent only 51.4 percent of total direct expenses.

5.8.2: Expenditures

The expenditures of the Department of Street and Sanitation Services are monitored by means of regular weekly, monthly, and annual accounting statements. There are three weekly accounting statements. One weekly printout monitors the cash flow, giving all commitments and disbursements from the previous weeks. Another weekly activity report gives information by the specific type of expenditure and indicates the transaction code, transaction type, date, reference number, and vendor name for cross reference to actual receipts. Finally, there is a weekly printout of outstanding purchase orders. The monthly report is a budget statement listing appropriations, disbursements, and commitments for the month. The annual accounting statement presents all appropriations and expenditures by major expense categories for each division. The major expenditures for the collection activities are presented in Table 25.

The two major expenses for the Department are labor costs and vehicle rental expenses. From these data, however, an interesting trend is apparent. The Department may be trying to become more capital intensive as indicated by the percentage of the budget expended on vehicle rental. This has increased from 18.9 percent in 1968-69 to 21.9 percent in 1970-71. At the same time, the labor expense has decreased from 80 percent to 76.6 percent. It is

TABLE 25

ANNUAL COLLECTION EXPENSES BY GENERAL COST ACCOUNTS; FISCAL YEAR 1969-71

Fiscal Year	Personnel Expense			Supplies		Service		Vehicle Rental Expense		Total
	Type of Labor	$ Cost	%	$	%	$	%	$	%	
1970-71	Classified Unclassified	563.438 4,460,877	76.6	23,144	.3	76,897	1.2	1,436,207	21.9	6,560,563
1969-70	Classified Unclassified	400,893 4,410,794	78.2	32,994	.5	70,720	1.1	1,235,436	20.1	6,150,837
1968-69	Classified Unclassified	349,188 4,114,180	80.0	23,245	.4	34,616	.6	1,055,106	18.9	5,576,355

SOURCE: Department of Street and Sanitation Services, City of Dallas., Management Information Sheet for Solid Waste Collection Program; Fiscal Years 1969,70,71.

possible, of course, that these trends may be accidental, but indirect evidence would seem to confirm our hypothesis. It is recalled that the Department is in the process of converting all its side loaders to step-in cabs. This will allow the Department to use two-man crews instead of three-man crews for collection. The conversion will cut down on the labor expense but at the same time increase the cost of equipment. The net effect is an anticipated cost savings to the Department as they turn to a more capital-intensive operation.

The disposal expenses for fiscal years 1969-70, 1970-71, and 1971-72 are presented in Table 26. It is clear from the data that the cost of the disposal operation is equally split between equipment and manpower. The fact that the cost of the operation is relatively constant is also evident. The increment of $154,286 between FY 1970-71 and FY 1971-72 is reflected by the fact that additional equipment and labor were required for the transition to the user-charge system.

The street cleaning operations represent a nominal expenditure in Dallas. Table 27 presents data on the costs from FY 1967 - 68 to FY 1970-71. The figures for the first two years are exact; the third and fourth year information is based on estimated and proposed costs, respectively. The costs for street cleaning activities are rising as a consequence of both labor and equipment. The increments are not large and reflect the inflationary trends that have been observed over the past few years.

TABLE 26

ANNUAL DISPOSAL EXPENSES BY GENERAL COST ACCOUNTS; FISCAL YEARS 1969-1971

Fiscal Year	Personnel		Vehicles		Other		Total
	$ Cost	%	$ Cost	%	$ Cost	%	
1971-1972 Note 2	941,707	52.1	782,797	43.3	83,557	4.6	$1,808,061
1970-1971 Note 2	810,533	49.0	758,600	45.9	84,642	5.1	1,653,775
1969-1970 Note 1	829,410	50.3	776,569	47.1	43,402	2.6	1,649,381

Note 1: Data taken from management information sheet, Field Operations, Public Works Department, Refuse Disposal Division.

Note 2: Data taken from Summary of FY 1971-1972 Operations City of Dallas, Department of Street and Sanitation Services, Refuse Disposal Division.

TABLE 27

ANNUAL STREET CLEANING EXPENSES BY GENERAL COST ACCOUNTS; FISCAL YEARS 1967-1971

Fiscal Year	Personnel		Supplies		Maintenance Equipment		Miscellaneous (Equipment rental)		Total
	$ Cost	%	$ Cost	%	$ Cost	%	$ Cost	%	
1970-71	884,200	65.2	2,550	.19	650	.05	469,000	34.6	$1,356,400
1969-70	922,500	68.6	2,550	.19	650	.05	419,250	31.2	1,344,950
1968-69	808,188	66.8	3,908	.32	1,493	.10	395,572	32.7	1,209,161
1967-68	718,761	69.5	2,433	.24	698	.07	311,825	30.2	1,033,627

SOURCE: Annual Proposed Budgets for FY 1969-1970 and FY 1970-1971

APPENDICES

APPENDIX A

DALLAS ORDINANCE PRESCRIBING SOLID WASTE STORAGE AND COLLECTION

APPENDIX A

8/25/72

ORDINANCE NO. 13772

An Ordinance amending Chapter 18 MUNICIPAL SOLID WASTES of the Revised Code of Civil and Criminal Ordinances of the City of Dallas, as amended, by revising Sections 18-2, 18-3, 18-4, 18-5, 18-6, 18-8, 18-9, 18-10, 18-11, and 18-12; deleting the definition of the Director of Public Works; providing a definition of the Director of Sanitation and of Sanitation Services; deleting the definition of City Sanitation Crew; providing a new definition for packout service; providing for approval by the Director of Sanitation of underground garbage, rubbish, or trash containers; providing that except on mechanically emptied receptacles no lid shall be attached to the container; providing throughout Chapter 18 for certain authorizations, directions, approvals, or designations by the Director of Sanitation; deleting any reference to the Director of Public Works; redefining the curb/street pickup location; providing for redefined conditions and location for pickup of rubbish or trash; provising for prohibition of placing tree cuttings in alleys; removing certain restrictions for disposal of solid waste material by efforts and expense of owner or occupant; requiring the biweekly collection of solid wastes containing putrescible material from apartments and commercial establishments; deleting the requirement of persons having an attendant on duty in the downtown area during certain hours to handle containers; clarifying the method of charging for sanitation service; clarifying authorized use of City's disposal facilities; providing a method of charge to apartments by election on the basis of cost plus 15%; deleting the charge at the disposal site for liquid wastes; authorizing the granting of credits for vacant dwelling units in complexes which contain two dwelling units (previously three dwelling units); providing for notice of illegally dumped solid waste by certified mail rather than registered mail; providing for use of City Tax rolls for determining the mailing address; providing for a severability clause; repealing all ordinances or parts of ordinances inconsistent or in conflict herewith; providing for a fine of not more than TWO HUNDRED DOLLARS ($200.00) for each violation hereof; providing for an effective date; and providing the revised ordinance to read as set forth herein.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That Chapter 18 of the 1960 Revised Code of Civil and Criminal Ordinances of the City of Dallas, be and it is hereby amended to read as follows:

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MUNICIPAL SOLID WASTES

ARTICLE I. COLLECTION AND DISPOSAL

§ 18-1. Scope of chapter.
§ 18-2. Definitions.
§ 18-3. Regulating containers for solid waste materials.
§ 18-4. Regulating the collection of solid waste materials from residences and duplexes.
§ 18-5. Regulating the collection and removal of solid waste materials from apartments, institutions and commercial establishments.
§ 18-6. Regulating the collection and removal of solid waste from the downtown area.
§ 18-7. Regulating collection and removal of dead animals.
§ 18-8. Specifying solid waste materials not handled by the Sanitation Services of the City of Dallas.
§ 18-9. Specifying charges for sanitation service.
§ 18-10. Regulating the processing and disposal of solid waste materials.
§ 18-11. Specifying charges for disposal of solid waste materials.
§ 18-12. Regulating the collection and removal of illegally dumped solid waste materials on private property.

Sec. 18-1. Scope of chapter.

The provisions of this chapter shall apply to all territory within the City of Dallas.

Sec. 18-2. Definitions.

For the purpose of this chapter the following words and phrases shall have the meanings respectively ascribed to them by this section:

Alley. Any public way, generally of less width than a street, used for public utility purposes and right-of-way and as an alternate secondary or emergency route for vehicle and pedestrian traffic, generally situated at the rear of or along side a tier of lots.

Apartment. Apartment as defined by the Building Code.

Apartment House. Apartment house as defined by the Building Code.

Brush. Non-putrescible solid waste consisting oof tree, shrub, and hedge clippings, providing that trunks and limbs shall not exceed three inches (3") in diameter and shall be cut in lengths not to exceed five feet (5').

Building Code. The Uniform Building Code of the City of Dallas, 1970 Edition.

City. The City of Dallas, Texas.

Code. The Revised Code of Civil and Criminal Ordinances of the City of Dallas.

Commercial Establishment. Any structure intended or used for the purpose of conducting a commercial business enterprise.

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Container. A receptacle for the deposit of solid waste.

Director of Public Health. The head of the Health Department of the City of Dallas or anyone authorized to act for him.

Director of Sanitation. The head of the Department of Street and Sanitation Services or anyone authorized to act for him.

Downtown area. The area within the Dallas city limits bounded by the west line of Houston Street, the south line of all properties on the south side of Young Street, the east line of Pearl Street, and the south line of Caston-Pacific extension.

Drive-In Service. Service involving City Sanitation Service employees driving in on private property to collect garbage.

Duplex. A structure intended for the use and occupancy as two family dwelling units.

Dwelling Unit. Dwelling unit as defined by the Building Code.

Food Establishment. Cafe, restaurant, or other similar establishment serving food or food products, including quick service drive-ins where food is prepared or served.

Garbage. Solid waste consisting of putrescible animal and vegetable waste materials resulting from the handling, preparation, cooking and consumption of food, including waste materials from markets, storage facilities, handling and sale of produce and other food products (Article 4477-7, V.T.C.S.).

Illegally dumped solid waste. Any solid waste placed on properties with or without the consent of the owner or person in control where such waste constitutes a nuisance detrimental to the public health and welfare.

Institution or Institutional. Any church, church building or structure housing any charitable, philanthropic or eleemosynary undertaking, or any school.

Manager. The person in charge of real estate used for apartment, institutional or commercial purposes.

Manual collection. The service rendered in collecting Municipal solid waste from containers, which containers can be handled in part by men picking up the containers as distinguished from picking up containers by mechanical means and which containers are too large for handling by manual means.

Municipal solid waste. Solid waste resulting from or incidental to municipal, community, trade, business, and recreational activities, including

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Street. Any public thoroughfare for the passage of vehicle and pedestrian traffic.

Vehicles. Any wheeled conveyance.

Sec. 18-3. Regulating containers for solid waste materials.

(A) Every person occupying a residence or duplex and every owner of an apartment shall provide such premise with a sufficient number of solid waste containers or receptacles to provide for the peak output of municipal solid wastes from those premises, as is hereinafter provided.

(B) Garbage containers or receptacles shall be watertight and constructed of a solid and durable grade of metal, plastic or paper material.

(1) In the case of those containers which are manually emptied by the Sanitation Service employees of the City of Dallas, no such containers shall exceed five (5) cubic feet in capacity and the combined weight of the waste and metal container shall not exceed seventy-five (75) pounds and the combined weight of the waste in plastic or paper container shall not exceed fifty (50) pounds.

(2) Underground garbage containers are prohibited for use in the City of Dallas unless the installation is specifically approved by the Director of Sanitation.

(3) All containers (except plastic or paper bags or other sack-type containers) shall be provided with suitable lifting handles on the outside and a close-fitting or other approved cover equipped with a handle.

(a) The container shall not contain any inside structures, such as bands or reinforcing angles or anything within the container to prevent the free discharge of the contents. Containers that have deteriorated or that have become damaged to the extent that the covers therefor will not fit securely or that they have jagged or sharp edges capable of causing injury to Sanitation Services employees or other persons whose duty it is to handle such containers shall be condemned by the City of Dallas and if such containers are not replaced after notice to the owner or user, such containers will be removed along with the contents thereof.

(b) The lid shall be close-fitting and shall remain in place covering the container or receptacle at all times when there is any material in the container. The lid may be attached by an appropriate means to the rack upon which the containers are placed or to an adjacent fence or other appropriate fixed object in order to prevent lids from getting into the pathway of vehicles. Except on mechanically emptied receptacles, no lid shall be attached to the container itself. Containers which have the lids directly attached to them constitute a hazard to Sanitation Services employees engaged in the collection of solid waste and shall be condemned by the City of Dallas and if such attachments are not removed after notice to the owner or user, such containers will be removed along with the contents thereof.

(4) Plastic or paper refuse bags or sack-type containers shall be constructed of a material and in a manner conforming to the standard City of Dallas specifications therefor as approved by the Director of Sanitation and on file in the office of the City Secretary. All bag or sack-type containers shall be secured at the top to prevent spillage.

(C) Rubbish or trash containers or receptacles shall be constructed of a suitable durable material.

(1) In the case of those containers which are manually emptied by the Sanitation Services employees of the City of Dallas, no such container shall exceed five (5) cubic feet in capacity and the combined weight of the waste and metal container shall not exceed seventy-five (75) pounds and the combined weight of the waste in plastic or paper container shall not exceed fifty (50) pounds.

(2) Underground rubbish or trash containers are prohibited for use in the City of Dallas unless the installation is specifically approved by the Director of Sanitation.

(3) Containers for small, loose rubbish or trash items shall either conform to the requirements for garbage containers or shall consist of a basket, cardboard box or burlap bag provided that the container is durable enough to hold the contents during the collection process and provided the capacity of the container shall not exceed five (5) cubic feet, and that the combined weight of the small, loose items of rubbish and trash and the

container shall not exceed fifty (50) pounds, and further provided that the container not be overloaded to the point where spillage occurs from overflow, wind, or handling.

(4) Plastic, paper or other bag or sack-type containers for small, loose items of rubbish or trash shall be secured at the top to prevent spillage.

Sec. 18-4. Regulating the collection of solid waste materials from residences and duplexes.

Regulating collection and removal by Sanitation Services of the City of Dallas:

(A) General: It shall be the duty of every occupant of any residence or duplex to provide a sufficient number of solid waste containers, at the place designated by the Director of Sanitation for collection of municipal solid waste from the particular premises and to provide adequate capacity for the solid waste placed out for collection without overloading the capacity of the containers provided therefor.

(1) All containers shall conform to the requirements of Section 18-3 herein.

(2) All collection of solid waste materials from residences or duplexes shall be by City of Dallas Sanitation Services crews and such service shall not be performed through any other person.

(B) Placement of containers for alley collection service for garbage: Except as may be otherwise specifically authorized by the Director of Sanitation, it shall be unlawful for any person to place any container within any alley within the City, and in cases where the garbage is to be collected from the alley outlet, containers shall be placed entirely within the lot line and adjacent to, but not in, the alley or other public utility easement or public way utilized for this purpose. Suitable racks for containers shall be provided by the occupant of any premises where racks are deemed by the Director of Sanitation as necessary to prevent overturn or spillage by the actions of animals, wind or other similar causes.

(1) In the event a fence without a gate separates the alley from the lot where the container is located, a platform rack for the container or containers shall be constructed so that the top of the containers shall be not lower than level with the top of the fence

nor higher than five feet above the bottom of the fence or the ground at the fence.

(2) Where a gate is provided in the fence, the containers shall be placed at the fence just inside the gate.

(3) In the event a fence is constructed with an inset space for the placement of solid waste containers outside the fence, but inside the lot line, containers placed therein shall be protected from overturn or spillage by a rack as specified by the Director of Sanitation.

(C) Placement of garbage containers for collection where no alley exists: Where a residence or duplex is not served by an alley, public utility easement or other public way in the rear or alongside thereof, all containers shall be placed just behind the curbline of the street abutting such property, but shall not be placed in the street or on the sidewalk, or in any manner placed where the containers will interfere with vehicular or pedestrian traffic.

(1) Where garbage is collected from the street curbline adjacent to the property, containers shall be placed there no earlier than six o'clock (6:00) p.m. of the afternoon preceding the collection day and must be removed to a point at the side or rear of the structure not later than eight o'clock (8:00) a.m. of the day following collection.

(2) Where special conditions exist which subject containers so placed to overturn and spillage, the Director of Sanitation may, at his discretion, require such containers subject to overturn and spillage to be placed in a portable or moveable rack.

(D) Placement of garbage containers for packout or drive-in collection service: Garbage containers shall be placed at locations and under such conditions approved by the Director of Sanitation for packout or drive-in collection service by the Sanitation Services of the City of Dallas.

(E) Placement of rubbish or trash or brush for collection service: Rubbish or trash or brush as defined herein shall normally be collected from the alley when it is paved and from the street when the alley is not paved or when no alley exists.

(1) Where rubbish or trash or brush is collected from the alley, public utility easement or public way and not from the street, all rubbish, trash or brush shall be placed at the property line, but shall not be placed in such a manner as to obstruct or interfere with vehicular or pedestrian traffic.

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(2) Where rubbish or trash or brush is not collected from the alley, public utility easement or other public way, but is collected from the street, it shall be placed just behind the curbline of the abutting street as designated by the Director of Sanitation, but shall not be placed in the street or on the sidewalk in such a manner as to obstruct or interfere with vehicular or pedestrian traffic.

(3) Where the quantity of brush set out for collection is excessive, the Director of Sanitation shall determine the amount of brush to be collected at any one time, the day of its collection and any other matters pertaining to brush collection in order not to disrupt normal service to other premises.

(4) Rubbish or trash consisting of small, loose items shall be placed in an approved container as specified in Section 18-3.

(5) Rubbish or trash consisting of large, bulky items, such as furniture, appliances, or tree cuttings shall not be placed out for collection in an alley, whether paved or unpaved, but shall be placed at the street as specified herein.

(6) All boxes and cartons shall be broken down and bundled where directed by the Director of Sanitation, and no bundle shall exceed fifty (50) pounds in weight for collection by Sanitation Services crews of the City of Dallas.

(7) Rubbish or trash collection service shall not be rendered as a packout collection service.

Sec. 18-5. Regulating the collection and removal of solid waste materials from apartments, institutions and commercial establishments.

The manual collection and removal of solid waste materials from apartments, institutions and commercial establishments, as defined herein, shall be performed by Sanitation Services crews of the City of Dallas only where the containers conform to the requirements of containers for residential or duplex collection service, as specified in Section 18-3. Rubbish or trash collection shall not be rendered by the Sanitation Services of the City of Dallas as a packout collection service. The owner or occupant of the premises shall have the option of disposing of solid waste materials through his own efforts and at his own expense or may contract with persons who are permitted to collect and remove solid waste materials as provided in the Code. Solid wastes that contain any putrescible material s[illegible] be collected a minimum of two times in a seven day period. The placement of containers for collection from apartment houses, institutions, and commercial establishments shall be approved by the Director of Sanitation.

Sec. 18-6. Regulating the collection and removal of solid waste from the downtown area.

(A) The collection of solid waste materials from the downtown area, as described herein, shall be governed by all the rules and regulations pertaining to apartments, institutions and commercial establishments, except that no solid waste materials or containers of any kind shall be placed for collection on the public streets, sidewalks, alleys or easements of the City prior to six o'clock (6:00) p.m. and all containers must be removed to a location inside the building situated on the premises by not later than eight o'clock (8:00) p.m. Alternatively, any person who owns or occupies any premises within the downtown area, as described herein, shall have the option of placing such solid waste materials in containers, as set forth herein, for collection no earlier than nine o'clock (9:00) p.m. and all such containers must be removed to a location inside the building situated on the premises by not later than eleven-thirty (11:30) p.m.

(B) At any of the establishments in the downtown area where there is insufficient space between any structure and the alley property line, the easement property line, or street property line to permit the placing of waste containers as required by the provisions of this ordinance relating to residences and duplexes, the containers may be placed in such public way at the very boundary thereof so as to permit the passage of pedestrian and vehicular traffic, subject to the approval of the Director of Sanitation. In these special locations, the owner or occupant of the premises shall remove all containers immediately after the solid waste material has been collected to a place within the structure situated on the premises until the next regularly scheduled time for collection.

Sec. 18-7. Regulating collection and removal of dead animals.

The bodies of dead animals shall not be placed in solid waste containers or in any street, alley, easement or public way. The collection and removal

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of dead animal bodies shall be a service of the City of Dallas and shall be furnished upon request or notification by any interested party.

Sec. 18-8. Specifying solid waste materials not handled by the Sanitation Services of the City of Dallas.

(A) General: The scope of the service rendered by the Sanitation Services of the City of Dallas in the collection and removal of solid waste materials is intended, in general, to serve the needs of dwelling units and their directly related activities, operating businesses, and commercial establishments except as excepted from the provisions of this Chapter. It is considered to be beyond the scope of such service to collect or remove solid waste materials generated by clearing, construction, demolition and other such solid waste materials resulting from an activity beyond the scope described above.

(B) Solid waste materials which will not be collected and removed by the Sanitation Services of the City of Dallas as a regular service:

(1) Rock, scrap building materials or other trash resulting from construction, remodeling or destruction by fire, the elements, acts of God, or other cause resulting from a general cleanup of vacant or improved property or trees, brush and/or debris cleared from property in preparation for construction or occupancy shall not be collected and removed by the City as a regular service, but these materials must be removed at the expense of the owner or developer.

(2) Industrial wastes resulting from manufacturing or processing operations, including waste from food and vegetable produce houses, poultry dressing establishments, meat processing and meat packing plants must be disposed of by the owner or occupant of the building, business or premises where such wastes originate in the manner prescribed by state law and any other applicable ordinance. The Director of Sanitation shall determine what wastes fall within the above industrial classification.

Sec. 18-9. Specifying charges for sanitation service.

(A) Method of charging and billing for Sanitation Services:

(1) A sanitation service charge shall be made for the following:

(a) All dwelling units in the City of Dallas which are served with water delivered under an active water account of the Water Utilities Department of the City of Dallas.

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(b) All dwelling units in the City of Dallas which are served with sanitary sewer service only under an active account of the Water Utilities Department of the City of Dallas.

(c) All lots, parcels and tracts which are provided Sanitation Services by the City of Dallas and which are not part of premises on which are located dwelling units covered by (a) or (b) above.

All sanitation service charges and fees shall be billed through the accounting and billing mechanisms of the Department of Water Utilities in a manner which will show each customer's fees and charges separately from the water bill. The charges and fees herein established and authorized shall be billed to the party in whose name the water service connection is taken where the premises are served with water and/or sewer and shall be billed to the party in control of the premises at other locations, and if this fact cannot be ascertained, the bill shall be directed to the record owner of such premises. The party who is so billed and to whom and/or for whom the services are made available shall be indebted to the City for said services and shall be obligated to make payment therefor as herein provided. The bill will become delinquent ten (10) days after it is rendered. For the purpose of this Section 18-9, the word "party" shall mean person, partnership, corporation, association or any other legal entity.

(2) In addition to all other legal remedies available for the collection of a debt, the following actions and remedies are authorized for delinquent payment of the charges herein authorized:

(a) The Sanitation Services may refuse to pick up and dispose of the garbage and rubbish (or trash) at the delinquent location;

(b) The water and/or sewer service, if any, serving the delinquent premises in question may be shut off and terminated.

(c) After January 1, 1972, a charge of ten percent (10%) of the total net bill shall be added in the event of delinquency.

(3) All collections by the Water Utilities Department shall be applied first to the water utilities charges, and the customer shall be deemed to have paid such water utilities charges first in the event any question should arise as to how outstanding balances should be composed and applied.

(a) All present Water Utilities Department customers to be billed hereunder shall be automatically placed on the billing for sanitation services charges, regardless of whether or not a written contract exists between the City and such customers.

(b) All present Water Utilities guaranty deposits upon termination of sanitary service and/or water service may be applied to any amounts due either for Sanitation Services charges or fees of Water Utilities bills.

(c) All Water Utilities services contracts hereafter entered into between that department and the customer shall contain an agreement that any guaranty deposit upon termination of sanitary service and/or water service may be applied to Sanitation Services fees and charges and to Water Utilities charges that have become due.

(B) General regulations:

(1) Establishment of service charges will be based upon the current use of the property rather than being based upon the zoning.

(2) There shall be no proration of service charges for a portion of a billing period. The initial billing shall be made concurrent with the initial water billing. The final billing for sanitation charges will be for a full billing period.

(3) Except as set forth herein, collection service shall be provided by the Sanitation Services of the City of Dallas for all residences and duplexes and for all manual collection from apartments, and such service shall not be contracted or performed by other than the Sanitation Services.

(C) Schedule of service charges:

(1) A collection service charge is hereby established for all residences and duplexes and including all mobile type dwelling units as follows:

(a) Alley or curb collection service for municipal solid waste - $1.50 per dwelling unit per month

(b) Collection service for municipal solid waste including packout or drive-in service - $5.00 per dwelling unit per month.

(2) A collection service charge will be made for all apartments which receive manual collection service from the Sanitation Services of the City of Dallas as follows:

(a) Alley, curb or drive-in collection service for municipal solid waste - $1.50 per dwelling unit per month

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(b) Apartment house(s) packout collection service for municipal solid waste (from locations approved by the Director of Sanitation) - $4.00 per dwelling unit per month.

Prior to the rendering of the service to be charged, the owner of such apartment may elect to be charged on the basis of cost plus fifteen percent (15%).

(3) A collection service charge will be made for all commercial establishments for all collection service provided by the Sanitation Services of the City of Dallas as follows:

TABLE OF MONTHLY CHARGES

QUANTITY OF SOLID WASTE			NUMBER OF COLLECTIONS PER WEEK		
No. of 20 Gal. Containers	Gallons	Cubic Yards	2	3	6
1- 5	100	1/2	$ 4.00	$ 6.00	$12.00
6-10	200	1	8.00	12.00	24.00
11-15	300	1 1/2	11.00	16.50	33.00
16-20	400	2	14.00	21.00	42.50
21-25	500	2 1/2	17.00	25.50	51.00
26-30	600	3	20.00	30.00	60.00

Prior to the rendering of the service to be charged, the owner of such commercial establishment may elect to be charged on the basis of cost plus fifteen percent (15%).

(4) Miscellaneous collection service charges will be as follows:

(a) Public housing may be charged as apartments.

(b) Churches, clinics, hospitals, public buildings, and schools will be charged as commercial locations.

(c) Unscheduled and/or extraordinary service such as collection of materials resulting from building permit work or originating from vacant property will be charged at cost plus fifteen percent (15%).

(5) Sanitation service charge credits will be granted for vacant or unoccupied dwelling units in complexes which contain two (2) or more dwelling units upon receipt from the applicant of proof of such vacancy meeting certain uniform requirements specified by the Director of Sanitation, but, such credits shall be limited to only those units which are continuously vacant or unoccupied for thirty (30) days or more; except that vacancy credit will not be allowed where charges are made on the basis of cost plus fifteen percent (15%).

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(6) Packout or drive-in service for certain handicapped persons meeting uniform requirements specified by the Director of Sanitation will be provided at the rate for alley or curb collection service.

(7) Any applicant for such credit under paragraph (5) or for such reduced rate under paragraph (6) above who intentionally makes any misrepresentation in any written statement required by such uniform requirements shall be guilty of a misdemeanor and upon conviction thereof shall be subject to a fine not to exceed Two Hundred Dollars ($200.00).

Sec. 18-10. Regulating the processing and disposal of solid waste materials.

(A) General regulations: All garbage and rubbish or trash or other solid waste materials must be processed and/or disposed of at a location and in a manner approved by the Director of Sanitation. All landfill operations, including disposal procedures and determination of acceptable users, are the responsibility of the Director of Sanitation or his authorized representative.

(1) Except upon approval by the Director of Sanitation, the use of disposal sites, transfer stations, or other disposal facilities operated by the City of Dallas is restricted to the disposal of Municipal Solid Waste originating in the City. Entry to such facilities is restricted to the following persons:

(a) employees of Sanitation Services in the performance of their duties for the City;

(b) persons hauling Municipal Solid Waste originating from their place of residence;

(c) employees of commercial haulers operating under a valid hauling permit issued by the City as provided by the Code;

(d) employees or owners of businesses hauling Municipal Solid Waste generated or resulting from the operation of such businesses.

Upon request, persons entering such disposal facilities shall present to any Sanitation Services employee at such disposal facility, a valid driver's license as proof of residency or a valid commercial hauling permit.

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(2) Any person entering upon a City operated disposal site for any purpose shall be conclusively presumed to know and appreciate the hazards and the extent of the damage which accompanies the accumulation of scrap wood, glass, nails, trash, brush, waste and garbage in every description; and the use of trucks, vehicles and heavy machinery to move, remove, bury and dispose of same; and every person entering upon any such site shall be conclusively presumed to have assumed the risk of injury connected with or resulting from such hazards and danger, and by his or her actions in entering upon such site, and for and in consideration of the permission granted by the City of Dallas to enter upon such site, every person shall covenant and be deemed to have covenanted not to sue and to indemnify, save harmless and defend the City of Dallas, its agents, officers and employees from and against any and all claims of any nature whatsoever for injury or damage to person or property, whether real or asserted, arising out of or resulting from the entry by such person upon any City operated disposal site.

(B) Processing and disposal of solid waste materials by private persons, firms, or corporations shall be permitted only after application has been made to the Director of Sanitation as complying with all applicable City, County and State regulations pertaining to solid waste processing and disposal operations.

(1) The Director of Sanitation shall have the authority to curtail, temporarily suspend, or permanently halt any solid waste processing or disposal operation being conducted by any private person, firm or corporation which does not conform to the requirements of City, County or State regulations pertaining thereto or shall in any manner jeopardize the public health, safety and welfare and to maintain that restriction until, in his judgment, adequate measures have been taken to assure that removal of the curtailment or suspension restrictions will not jeopardize the public health, safety or welfare.

(2) The Director of Sanitation shall have the authority to cause to be rejected for processing or disposal any material which, in his judgment, would create a nuisance by reason of emission, disagreeable odors, or would operate to make the processing or disposal facilities unwholesome or adversely affect the public health, safety and welfare.

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(C) Processing and disposal of solid waste materials by the City of Dallas:

(1) It shall be unlawful for any person to take, remove or carry away from any processing or disposal facility operated by the City of Dallas any garbage, rubbish, trash or other solid waste material, article, thing, or object situated thereon, whether or not same has monetary value, without prior written permission and approval of the Director of Sanitation. In prosecutions for this offense, it shall not be necessary to describe the thing or things taken, removed or carried away other than as generally described herein or as "article", "thing", or "item", and it shall not be necessary to allege that the same had "value".

(2) The Director of Sanitation shall have the authority to designate which processing and/or disposal sites are to be opened to the public and which are to be restricted to municipal vehicles only, provided that no processing or disposal facility within the City of Dallas will be opened to solid waste materials originating outside the city limits of the City of Dallas without prior written permission and approval of the Director of Sanitation.

Sec. 18-11. Specifying charges for disposal of solid waste materials.

Method of charging and billing for disposal of solid waste materials: The following charges are established for disposing of municipal solid waste at the City of Dallas disposal sites:

(A) Earth, rocks and inert material suitable for cover of refuse - No Charge

(B) Passenger cars, station wagons, and pickups used by Dallas resident owners to haul owner's waste - No Charge

(C) Passenger cars, station wagons, and pickups used by non-Dallas resident owners to haul owner's waste - $1.00 per load

(D) Commercial Pickups and Panel Trucks and Single Axle Trailers - $1.00 per load

(E) Trucks, Two Axle with cargo bed length less than 15 feet, or Trailer Two Axle - $3.00 per load

(F) Trucks, Three Axle or Truck, Two Axle with cargo bed length 15 ft. or greater - $5.00 per load

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(G) Trucks, Semi-Trailers or Roll off Containers - $7.00 per load

(H) Truck, Compactor, 30 C.Y. or less - $9.00 per load

(I) Truck, Compactor, Greater than 30 C.Y. - $11.00 per load

(J) Any load including tires or waste rubber - $3.00 additional charge per load

(K) Disposal service charges shall be payable by any of the following methods: (1) cash at the disposal site, (2) appropriate coupons which shall be available for purchase at locations specified by the Director of Sanitation, or (3) monthly billing for commercial haulers upon approval of the Director of Sanitation and under such conditions as may be established by the Director of Sanitation as approved by the City Attorney.

Sec. 18-12. Regulating the collection and removal of illegally dumped solid waste materials on private property.

(A) Notice to remove: It shall be the duty of the Director of Sanitation of the City of Dallas to notify the owner or agent for management purposes of any private premises within the City upon which any solid waste material has been illegally placed or disposed to remove such solid waste materials within ten (10) days. This notice shall be in writing and may be served on the owner or agent by handing it to him in person or by Certified Mail addressed to such owner or agent at his post office address as shown on the tax rolls of the City or County of Dallas, or where such address is not shown, then by notice by publication in a paper in general circulation in the City of Dallas as many as two (2) times within ten (10) consecutive days, provided that such notice is not necessary when such waste material is determined by the Director of Public Health to be an immediate health hazard.

(B) Failure to comply with removal notice: The failure by either the owner or such agent, as the case may be, to comply with the notice set out in the preceding section, shall render such person guilty of a misdemeanor and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which the violation is continued or permitted, and upon the conviction of any such violation, such person shall be punishable by a fine of not more than Two Hundred ($200.00) Dollars.

(C) City authorized to collect and remove solid waste materials: Upon the failure of any such Owner or Agent to comply with the notice, as set out in this Section, or upon the written request and authorization of such owner or agent so notified, or in the event that the Director of Public Health determines that such conditions constitute an immediate health hazard, it shall become the responsibility of the Director of Sanitation to have such solid waste materials collected and removed from any property within the City of Dallas.

(D) Charge to be levied and collected by the City for solid waste material collection and removal: A charge of Twenty-Five Dollars ($25.00) for each collection and removal of solid waste materials shall be levied, assessed and collected against such property each time such collection and removal of solid waste materials shall be performed, provided that an additional charge can be levied, assessed and collected against such premises for the actual additional cost for said collection and removal. The charges provided for herein shall be levied, assessed and collected by the Director of Revenue and Taxation of the City of Dallas, and if any person shall fail to pay such charges so assessed within thirty (30) days after proper notice, the Director of Revenue and Taxation of the City of Dallas will file, with the County Clerk of Dallas County, Texas, a statement by the Director of Sanitation, setting out the expenses that the City has incurred pursuant to the provisions of this Section, and the City of Dallas shall thereby perfect a Privileged Lien on the property involved, second only to tax liens and liens for street improvements, to secure the expense to the City, together with ten (10%) percent interest from the date such payment is due."

SECTION 2. Should any section, subsection, sentence, provision, clause or phrase be held to be invalid for any reason, such holding shall not render invalid any other section, subsection, sentence, provision, clause or phrase of this Ordinance, and same for this purpose are deemed to be severable.

SECTION 3. That all ordinances or parts of ordinances inconsistent or in conflict with the provisions of this Ordinance are hereby expressly repealed.

SECTION 4. That any person, firm or corporation violating any provision of this Ordinance shall be guilty of a misdemeanor, and upon conviction thereof, shall be subject to a fine of not more than Two Hundred Dollars ($200.00) for each violation hereof, and each day such violation shall be permitted to exist shall constitute a separate offense.

SECTION 5. That this ordinance shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas and it is accordingly so ordained.

APPROVED AS TO FORM:

N. ALEX BICKLEY, City Attorney

N. Alex Bickley

AUG 23 1972

PASSED.. 1972
CORRECTLY ENROLLED........................ N. Alex Bickley
City Attorney

ATTEST:
Harold G. Shank
City Secretary

APPENDIX B

ENABLING ORDINANCE TO INITIATE USER CHARGE SYSTEM

APPENDIX B

ORDINANCE NO. 13796

An Ordinance amending CHAPTER 18 "MUNICIPAL SOLID WASTES," of the 1960 Revised Code of Civil and Criminal Ordinances of the City of Dallas, Texas, as amended; transfering the enforcement of weed regulations to the Department of Street and Sanitation Services; providing for grass to be included in the regulations; providing for a change in the method of serving notice; repealing Sections 19-118 through 19-124 of CHAPTER 19; providing for a fine not to exceed TWO HUNDRED DOLLARS ($200.00) for each violation; providing a severability clause; and providing October 1, 1972 as the effective date.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That CHAPTER 18, "MUNICIPAL SOLID WASTES", of the 1960 Revised Code of Civil and Criminal Ordinances of the City of Dallas, Texas, as amended, is hereby amended by adding, thereto, an Article II, "Weeds or Grass", to read as follows:

"ARTICLE II

Weeds or Grass

Sec. 18-13. Growth to certain height prohibited; premises deemed nuisance.

It shall be unlawful for any owner or person in control of any occupied or unoccupied premises, to permit weeds or grass to grow to a height greater than twelve (12) inches upon the premises, including the front or side parkway between the property line or sidewalk and the curb and the rear or side parkway between the property line and the alley pavement or traveled way; provided that where the alley is not open to traffic that the parkway in such cases shall be considered to be between the property line and the center line of the alley. Any premises, upon which weeds or grass are permitted to grow to a height greater than twelve (12) inches, shall be deemed a nuisance as a fire hazard and as dangerous to public health. It likewise shall be unlawful for any owner or person in control of any premises within the City to leave weeds or grass on such premises after they have been cut, and it shall be the duty of the owner or person in control of any premises within the City to remove weeds or grass from such premises after they have been cut.

Sec. 18-14. Duty of owner as to cutting and removal of weeds or grass.

It shall be the duty of any owner or person in control of any occupied or unoccupied premises to cut and remove all weeds and grass as often as may be necessary to comply with the preceding section; provided, that the removing and cutting of

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weeds or grass at least once in every three (3) weeks shall be deemed to be in compliance with this section. It shall be the duty of any owner or person in control of any occupied or unoccupied premises to use every precaution, in order to prevent the weeds or grass from growing on such premises so as to become a nuisance.

Sec. 18-15. Duty of director of street and sanitation services or fire marshall.

The Director of Street and Sanitation Services shall enforce the provisions of this Article; provided, that where a fire hazard exists, the provisions of Sections 18-13 and 18-14 shall be enforced by the fire marshall.

Sec. 18-16. Notice to remove weeds - service to owner.

It shall be the duty of the Director of Street and Sanitation Services to notify the owner or person in control of any premises within the City, not dedicated to an agricultural use, on which are growing weeds or grass in a height greater than twelve (12) inches, to remove such weeds or grass within ten (10) days. The notice shall be in writing and may be served on the owner or person in control by handing it to him in person, by United States Certified Mail, Return Receipt Requested, addressed to such owner or person in control at his post office address, or in the event the owner or person in control cannot be found and the certified letter is returned by the United States Postal Service, then by publication as many as two (2) times within ten (10) consecutive days in the official newspaper as adopted by the City Council.

Sec. 18-17. City removal of weeds - upon owner's failure to do so or at owner's request.

Upon the failure of the owner or person in control to comply with the notice, as set forth in Section 18-16 of this Article, or upon the written request and authorization of such owner or person in control so notified, it shall become the responsibility of the Director of Street and Sanitation Services to have the weeds or grass cut, raked and removed on all property within the City of Dallas.

Sec. 18-18. Charges to be levied, etc., against such property; lien on property for failure to pay charges.

A charge of Twenty-five ($25.00) Dollars for each cutting, raking, and removal of weeds or grass shall be levied, assessed and collected against property each time such cutting, raking and removal shall be performed, where the area cut is not greater than 7500 square feet. On tracts of land that exceed 7500 square feet, the additional charge of Two and 50/100 ($2.50) Dollars shall be levied, assessed and collected for each additional 1000 square feet or portion thereof, which is cut. In the event that there are obstructions such as trees, shrubs, bushes, brush, excavations, foundations, demolished structures or any other similar obstruction, an additional charge shall be

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levied, assessed and collected against such premises for the actual additional costs resulting from the handling of these obstructions. The charges provided herein shall be levied, assessed and collected by the Director of Revenue and Taxation of the City of Dallas. If any person shall fail to pay the charges so assessed within thirty (30) days after being notified, the Director of Revenue and Taxation shall file, with the County Clerk of Dallas County, Texas, a statement by the Mayor of such expenses. The City of Dallas shall have a privileged lien on the premises, second only to tax liens and liens for street improvements to secure the expenditures so made and ten (10) percent interest on the amount from the date payment is due. For any such expenditures, and interest, suit may be instituted and foreclosure had in the name of the City; and the statement so made by the Mayor, or a certified copy of the statement, shall be prima facie proof of the amount expended in such work or improvements."

SECTION 3. That Article IX of Chapter 19, "HEALTH AND SANITATION," which includes Section 19-118 through 19-124, of the 1960 Revised Code of Civil and Criminal Ordinances of the City of Dallas, Texas, as amended, is hereby expressly repealed.

SECTION 4. That any person who violates any provision of this ordinance shall be guilty of a misdemeanor and upon conviction thereof, shall be subject to a fine not to exceed TWO HUNDRED AND NO/100 ($200.00) DOLLARS.

SECTION 5. That the terms and provisions of this Ordinance are severable and shall be governed by Section 1-4 of CHAPTER 1 of the 1960 Revised Code of Civil and Criminal Ordinances of the City of Dallas, Texas, as amended.

SECTION 6. That this Ordinance shall take effect October 1, 1972 and it is accordingly so ordained.

APPROVED AS TO FORM:

N. ALEX BICKLEY, City Attorney

By:____________________
Assistant City Attorney

PASSED SEP 18 1972
CORRECTLY ENROLLED SEP 19 1972 [illegible]
City Attorney

ATTEST:
Harold G. Shank
City Secretary

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APPENDIX C

ANTI-LITTER ORDINANCE

JHF

ORDINANCE NO. 13604

An Ordinance amending Section 7A-18, "Duty of landowner to maintain property free of litter," and Section 7A-20, "Clearing of litter from private property; penalty for violation of chapter; enforcement of chapter," of CHAPTER 7A, "ANTI-LITTER REGULATIONS," of the 1960 Revised Code of Civil and Criminal Ordinances of the City of Dallas, Texas, as amended; providing for additional standards for a landowner or person in control of private property to maintain property free of litter; providing for enforcement of CHAPTER 7A by the director of street and sanitation services; providing a penalty not to exceed $200.00; providing a savings clause; providing a severability clause; and providing an effective date.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DALLAS, TEXAS:

SECTION 1. That Section 7A-18, "Duty of owner to maintain property free from litter," of CHAPTER 7A, "ANTI-LITTER REGULATIONS," of the 1960 Revised Code of Civil and Criminal Ordinances of the City of Dallas, Texas, as amended, is amended to read as follows:

"Sec. 7A-18. Duty of landowner to maintain property free of litter.

It shall be unlawful for any owner or person in control of private property to place; deposit; throw; permit to accumulate; or permit or cause to be placed, deposited or thrown, any litter on said private property or in or on any gutter or parkway adjacent to said private property or on one-half of that portion of an alley adjacent to said private property, unless the same has been deposited in authorized private receptacles for collection."

SECTION 2. That Section 7A-20, "Clearing of litter from private property; penalty for violation of chapter; enforcement of chapter," of CHAPTER 7A, "ANTI-LITTER REGULATIONS," of the Revised Code of Civil and Criminal Ordinances of the City of Dallas, Texas, as amended, is amended to read as follows:

"Sec. 7A-20. Clearing of litter from private property; penalty for violation of chapter; enforcement of chapter.

(a) Notice to remove. The Director of Street and Sanitation Services shall notify the owner or person in control of private property, such to

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include any gutter or parkway adjacent to said private property or one-half of that portion of an alley adjacent to said private property, upon which litter has been thrown or deposited to remove it within ten (10) days and to thereafter maintain said private property, any gutter or parkway adjacent to said property, and one-half of that portion of an alley adjacent to said private property free of litter. This notice shall be in writing and may be served upon the owner or person in control of private property by handing it to him in person, or to an adult person at his place of business or residence, or by certified letter addressed to such owner or person in control of private property at his post office address. No owner or person in control of private property shall fail, neglect or refuse to properly dispose of litter upon the private property, in or on any gutter or parkway adjacent to said private property, or on one-half of that portion of an alley adjacent to said private property within ten (10) days after notice as herein provided, and to thereafter maintain such property free of litter.

(b) Penalty for violations of this chapter. Any person violating any provision of this chapter shall, upon conviction thereof, be fined not more than TWO HUNDRED DOLLARS, and such person shall be deemed guilty of a separate offense for each and every day or portion thereof in which the violation is continued or permitted.

(c) Authority to enforce chapter. The director of street and sanitation services shall enforce the terms and conditions of this chapter when violations occur on private property, however, when a fire hazard exists on private property, the provisions of this chapter shall be enforced by the fire marshal. Any police officer of the city shall enforce the terms and conditions of this chapter when a violation occurs in a public place, and in addition thereto, any member of the park patrol of the city is empowered to enforce the terms and conditions of this chapter when a violation occurs in any public park in the city."

SECTION 3. That any person who violates any provisions of this ordinance shall be guilty of a misdemeanor and upon conviction thereof, shall be subject to a fine not to exceed TWO HUNDRED AND NO/100 ($200.00) DOLLARS.

SECTION 4. That CHAPTER 7A of the 1960 Revised Code of Civil and Criminal Ordinances of the City of Dallas, Texas, as amended, shall remain in full force and effect save and except as amended herein.

SECTION 5. That the terms and provisions of this ordinance are severable and shall be governed by Section 1-4 of CHAPTER 1 of the 1960 Revised Code of Civil and Criminal Ordinances of the City of Dallas, Texas, as amended.

SECTION 6. That this ordinance shall take effect immediately from and after its passage and final publication in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so ordained.

SEP 25 1972
PASSED: ....
CORRECTLY ENROLLED .... SEP 25 1972
N. Alex Bickley
City Attorney

ATTEST:
Harold G. Shank
City Secretary.

APPROVED AS TO FORM:
N. ALEX BICKLEY, City Attorney

By William F. Douglass
William F. Douglass
Assistant City Attorney

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13903